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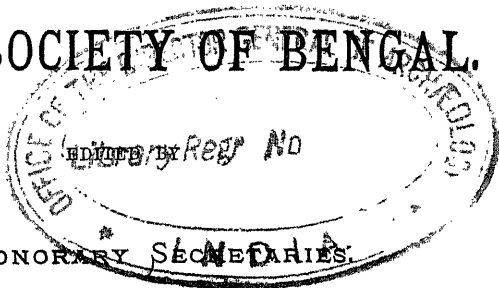
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OF THE

ASIATIC SOCIETY OF BENGAL.



THE HONORARY SECRETARIES.



JANUARY TO DECEMBER,

1885.

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LIST OF MEMBERS
OF THE
ASIATIC SOCIETY OF BENGAL.

ON THE 31ST DECEMBER, 1884.

Council and Officers for 1884.

President.

H. F. Blanford, Esq., F. R. S.

Vice-Presidents.

Dr. Rájendralála Mitra, C. I. E.

The Hon. J. Gibbs, C. S. I., C. I. E.

D. Waldie, Esq., F. C. S.

Secretaries and Treasurer.

J. Wood-Mason, Esq.,

Dr. A. F. R. Hoernle.

F. E. Pargiter, Esq., B. A., C. S.

F. W. Peterson, Esq., F. C. S.

Other Members of Council.

Hon. H. J. Reynolds, B. A., C. S.

H. B. Medlicott, Esq., F. R. S.

J. Westland, Esq., C. S.

Nawab Abdul Latíf Khán Bahádur, C. I. E.

Major J. Waterhouse, B. S. C.

Alex. Pedler, Esq., F. C. S.

Hon. A. W. Croft, M. A.

C. H. Tawney, Esq., M. A.

Babu Pratápachandra Ghosha, B. A.

Hon. H. Beverley, M. A., C. S.

LIST OF ORDINARY MEMBERS.

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R. = Resident. N. R. = Non-Resident. N. S. = Non-Subscribing.

L. M. = Life Member. F. M. = Foreign Member.

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N. B.—Members who have changed their residence since the list was drawn up are requested to give intimation of such a change to the *Secretaries*, in order that the necessary alteration may be made in the subsequent edition. Errors or omissions in the following list should also be communicated to the *Secretaries*.

Members who are about to leave India and do not intend to return are particularly requested to notify to the *Secretaries* whether it is their desire to continue members of the Society; otherwise, in accordance with Rule 40 of the Bye-Laws, their names will be removed from the list at the expiration of three years from the time of their leaving India.

Date of Election.		
1860 Dec. 5.	R.	Abdul-Latíf, Khán Bahádur, Nawab, c. i. e. <i>Calcutta</i> .
1860 July 4.	N.R.	Ahmad Khán Bahádur, Hon. Sayyid, c. s. i. <i>Aligarh</i> .
1872 April 3.	N.R.	Ahsan-ullah, Nawáb. <i>Dacca</i> .
1860 April 4.	N.R.	Aitchison, J. E. T., M. D., Secretary to the Surgeon General, H. M.'s Forces, Bengal, with the Afghan Boundary Commission.
1884 Mar. 5.	L.M.	Ali Kader Syud Hossain Ali Mirza, Bahadur, Nawab Nazim of <i>Murshedabad</i> .
1878 Mar. 6.	N.S.	Allen, G. W., c. i. e. <i>Europe</i> .
1874 June 3.	R.	Amír Ali, Hon., Barrister-at-Law. <i>Calcutta</i> .
1865 Jan. 11.	R.	Anderson, John, M. D., F. R. S., F. L. S., Superintendent, Indian Museum. <i>Calcutta</i> .
1884 Sept. 3.	R.	Anderson, J. A. <i>Calcutta</i> .
1875 Feb. 3.	N.R.	Armstrong, J., Surgeon, Bengal Army. <i>Naini Tal</i> .
1871 Sept. 6.	R.	Atkinson, Edwin Felix Thomas, B. A., c. s., Acct-General. <i>Calcutta</i> .
1869 Feb. 3.	N.R.	Attar Singh Bahádur, Sirdár, c. i. e., M. U. F., Chief of Bhadour. <i>Ludiana</i> .
1870 Feb. 2.	N.R.	Baden-Powell, Baden Henry, c. s., c. i. e., Offg. Judge, Chief Court of the Panjab. <i>Lahore</i> .
1873 Aug. 6.	N.S.	Badgley, Major William Francis, s. c., Offg. Deputy Superintendent of Surveys. <i>Europe</i> .
1862 Feb. 5.	R.	Baisák, Gaurdás, Deputy Magistrate. <i>Calcutta</i> .
1859 Aug. 3.	R.	Balaichand Sinha. <i>Calcutta</i> .
1865 Nov. 7.	N.S.	Ball, Valentine, M. A., F. R. S., F. G. S. <i>Europe</i> .

Date of Election.		
1860 Nov. 1.	R.	Banerjea, Rev. Kristo Mohun, LL. D. <i>Calcutta.</i>
1862 Aug. 1.	R.	Barclay, Arthur, M. B., Surgeon, Bengal Medical Service. <i>Calcutta.</i>
1869 Dec. 1.	L.M.	Barker, R. A., M. D., Civil Surgeon. <i>Nya Doomka, Santhal Pergunnahs.</i>
1879 Aug. 28.	N.R.	Barkley, D. G., M. A., C. S. <i>Lahore.</i>
1881 Aug. 3.	N.R.	Barstow, Henry Clements, C. S., Magistrate and Collector. <i>Cawnpore.</i>
1878 June 5.	R.	Bayley, C. S., C. S., Offg. Under-Secretary to the Government of Bengal. <i>Calcutta.</i>
1873 Feb. 5.	R.	Bayne, R. R., M. R. I. B. A., Draughtsman, Chief Engineer's Office, E. I. Railway. <i>Calcutta.</i>
1864 Sept. 7.	N.R.	Beames, John, B. C. S., Offg. Commissioner, Burdwan Division. <i>Chinsurah.</i>
1878 Sept. 25.	N.R.	Beighton, T. D., C. S., Offg. Judge. <i>Patna.</i>
1881 Mar. 2.	N.R.	Benett, W. C. <i>Cawnpore.</i>
1862 Oct. 8.	N.S.	Bernard, Charles Edward, C. S., Chief Commissioner. <i>British Burmah.</i>
1872 Aug. 7.	R.	Beverley, The Hon. Henry, M. A., C. S. <i>Calcutta.</i>
1876 Nov. 15.	N.R.	Beveridge, Henry, C. S., District and Sessions Judge. <i>Faridpur.</i>
1878 Oct. 4.	R.	Bhakta, Krishna Gopal. <i>Calcutta.</i>
1879 Mar. 5.	N.R.	Biddulph, Major J., B. S. C. <i>Europe.</i>
1884 Jan. 2.	N.R.	Bidic, G., Brigade-Surgeon, M. B., F. L. S., C. I. E., Supdt. Govt. Central Museum. <i>Madras.</i>
1884 Feb. 6.	R.	Bigg-Wither, Major A. C., B. A., A. I. C. E. <i>Calcutta.</i>
1875 July 7.	N.R.	Black, F. C., Archæological Engineer. <i>Bellary, Madras Presy.</i>
1857 Mar. 4.	L.M.	Blanford, H. F., A. R. S. M., F. R. S., F. G. S., Meteorological Reporter, Govt. of India. <i>Europe.</i>
1879 Aug. 28.	R.	Blyth, W. D., M. A., LL. D., C. S., Under-Secretary to the Govt. of Bengal. <i>Europe.</i>
1880 Nov. 3.	N.R.	Bose, Pramatha Nath, B. Sc., F. G. S., Geological Survey of India. <i>Raipur, C. P.</i>
1877 May 2.	N.S.	Bourdillon, James Austin, C. S., Inspector-General of Registration. <i>Europe.</i>
1876 Nov. 15.	N.R.	Bowie, Major M. M. <i>Nagpur.</i>
1868 Jan. 15.	N.R.	Boxwell, John, C. S., Offg. Comr., Patna Divn. <i>Gya.</i>
1883 Feb. 7.	R.	Brace, Lewis Jones K., Curator of the Herbarium, Royal Botanic Garden. <i>Sibpur.</i>
1876 May 4.	N.R.	Bradshaw, Brigade-Surgeon A. F., A. M. D. <i>Quetta.</i>
1860 Mar. 7.	L.M.	Brandis, Dietrich, Ph. D., F. L. S., F. R. S. <i>Europe.</i>
1879 Jan. 8.	R.	Browne, J. F., C. S., M. R. A. S., Offg. District and Sessions Judge, 24-Pergunnahs. <i>Calcutta.</i>
1879 April 2.	R.	Calcutta, The Rt. Rev. the Lord Bishop of. <i>Calcutta.</i>
1869 Jan. 20.	N.R.	Cadell, Alan, B. A., C. S., Magte. <i>Aligarh, N. W. P.</i>
1880 Mar. 3.	N.R.	Carlisle, A. C., Archæological Survey of India. <i>Allahabad.</i>

Date of Election.		
1881 Feb. 2.	N.R.	Carter, Philip John, Deputy Conservator of Forests. <i>Rangoon.</i>
1876 Nov. 15.	R.	Cayley, Surgeon-Major H., Surgeon, Mayo Native Hospital. <i>Europe.</i>
1881 Mar. 2.	N.R.	Channing, Francis Chorley, B. C. S. <i>Europe.</i>
1883 Aug. 30.	R.	Chatterji, Dr. Aghorenath. <i>Calcutta.</i>
1881 Mar. 2.	N.R.	Chatterji, Bhairab Chunder. <i>Jessore.</i>
1880 May 5.	N.R.	Chatterji, Tara Prasada, Deputy Magte. <i>Burdwan.</i>
1880 Jan. 7.	R.	Chaudhuri, Govinda Kumara. <i>Calcutta.</i>
1861 Mar. 1.	N.R.	Chaudhuri, Haranchandra, Zamindar. <i>Sherpur, Maimansingh.</i>
1880 Nov. 3.	N.R.	Chaudhuri, Khirode Chandra Roy. <i>Berhampore College.</i>
1874 Aug. 5.	N.R.	Chennell, A. W., Asst. Surveyor, Survey Department. <i>Shillong.</i>
1877 Aug. 30.	N.S.	Clarke, Major Henry Wilberforce, R. E. <i>Europe.</i>
1880 Aug. 26.	N.R.	Clerk, Lieut.-Colonel Malcolm G., Commandant of the Fort. <i>Chunar, N. W. P.</i>
1881 May 4.	N.R.	Cockburn, John, Asst. Sub-Depy. Opium Agent. <i>Karwi.</i>
1884 April 2.	N.R.	Cole, Major H. H., R. E. <i>Mhow.</i>
1884 Mar. 5.	R.	Colvin, The Hon. Sir Auckland, K. C. M. G. <i>Calcutta.</i>
1874 Nov. 4.	F.M.	Constable, Archibald, Resident Engineer and Personal Asst. to Chief Engineer, Oudh and Rohilkund Railway. <i>Lucknow.</i>
1881 Mar. 2.	N.R.	Cook, Capt. L. A. C. <i>Jamrud.</i>
1884 Aug. 6.	R.	Cotes, E. C., Indian Museum. <i>Calcutta.</i>
1876 Mar. 1.	N.R.	Crawford, James, B. A., C. S., Barrister-at-Law, Offg. District and Sessions Judge. <i>Nuddea.</i>
1877 June 6.	R.	Croft, Hon. A. W., M. A., Director of Public Instruction. <i>Calcutta.</i>
1874 Mar. 4.	N.S.	Crombie, Alexander, M. D., Civil Surgeon. <i>Europe.</i>
1883 April 4.	N.R.	Crosthwaite, Hon. C. H. T., C. S., Central Provinces. <i>Nagpur.</i>
1873 Aug. 6.	N.S.	Cunningham, David Douglas, M. D., Professor, Medical College. <i>Calcutta.</i>
1873 Dec. 3.	N.R.	Dames, Mansel Longworth, C. S., Asst. Commissioner. <i>Dera Ismail Khan.</i>
1877 June 6.	N.R.	Darbhanga, H. H. the Maharájá of. <i>Darbhanga.</i>
1865 June 7.	N.R.	Dás, Rájá Jaykishan, Bahádur, C. S. I. <i>Bijnor.</i>
1879 April 7.	N.R.	Dás, Ram Saran, M. A., Secy. Oudh Commercial Bank Limited. <i>Fyzabad, Oudh.</i>
1869 April 7.	F.M.	Day, Dr. Francis, F. L. S., F. Z. S. <i>Europe.</i>
1859 Oct. 6.	N.R.	Delmerick, J. G., Extra Assistant Commissioner. <i>Mussoorie.</i>
1862 May 7.	N.R.	Dhanapati Singh Dughar, Raí Bahádur. <i>Azimganj.</i>
1880 Dec. 1.	N.R.	Dilawar Husein Ahmad, Maulavi, Depy. Magte., and Depy. Collr. <i>Jamui, Monghyr.</i>

Date of Election.		
1877 July 4.	R.	Diler Jang, Nawáb Syad Ashgar Alí, Khan Bahadur, C. S. I. <i>Calcutta.</i>
1875 Mar. 3.	R.	Douglas, J. C., Supdt. of Telegraph Stores. <i>Alipore.</i>
1882 Mar. 1.	N.R.	Douie, J. M., C. S., Settlement Officer. <i>Karnal, Panjab.</i>
1879 Feb. 5.	N.R.	Duthie, J. F., Superintendent, Govt. Botanical Gardens. <i>Saharanpur.</i>
1877 Aug. 30.	N.R.	Dutt, Kedarnath, Depy. Magistrate. <i>Calcutta.</i>
1873 April 2.	R.	Dutt, Omesh Chunder. <i>Calcutta.</i>
1881 Mar. 2.	F.M.	Eden, The Hon'ble Sir Ashley, K. C. S. I., C. I. E. <i>Europe.</i>
1870 Mar. 9.	L.M.	Edinburgh, H. R. H. The Duke of. <i>Europe.</i>
1863 May 6.	R.	Edgar, John Ware, C. S., C. S. I. <i>Calcutta.</i>
1874 Dec. 2.	N.S.	Egerton, The Hon. Sir Robert Eyles, C. S., K. C. S. I., C. I. E. <i>Europe.</i>
1871 Dec. 2.	N.S.	Eliot, J., M. A., Meteorological Reporter to the Govt. of Bengal. <i>Europe.</i>
1859 Dec. 7.	R.	Fath Alí, Maulavi. <i>Calcutta.</i>
1863 Jan. 15.	N.S.	Fedden, Francis, Asst., Geological Survey of India. <i>Europe.</i>
1876 Jan. 5.	F.M.	Feistmantel, Ottokar, M. D., Palæontologist, Geological Survey of India. <i>Europe.</i>
1880 April 7.	N.R.	Fiddian, W., M. A., C. S., Offg. Magistrate and Collector <i>Birbhum.</i>
1879 July 2.	N.R.	Finucane, M., C. S., Director of Agriculture, Bengal. <i>Europe.</i>
1869 Sept. 1.	N.S.	Fisher, John Hadden, C. S. <i>Europe.</i>
1872 Dec. 4.	N.R.	Forbes, Lieut.-Col. John Greenlaw, R. E. <i>Allahabad.</i>
1876 July 5.	N.R.	Foulkes, The Rev. Thos., F. L. S., M. R. A. S., F. R. G. S., Chaplain. <i>Coimbatore, Madras Presy.</i>
1869 Sept. 1.	N.R.	Fryer, Colonel G. E., M. S. C. Deputy Commissioner. <i>Thayetmo, B. Burmah.</i>
1880 April 7.	N.R.	Gajapati, Ananda Ram, Raja of Vizianagram. <i>Vizianagram.</i>
1878 Dec. 3.	N.R.	Gamble, J. S., M. A., Conservator of Forests, Northern Circle. <i>Madras.</i>
1883 Aug. 1.	N.R.	Garga, Kumar Isvariprasad, Zemindar. <i>Maisádal.</i>
1859 Aug. 3.	L.M.	Gastrell, Major-General James Eardley, (retired). <i>Europe.</i>
1867 Dec. 4.	N.R.	Gay, E., M. A., C. S., Accountant-General. <i>Bombay.</i>
1883 Aug. 30.	R.	Ghose, Manomohan. <i>Calcutta.</i>
1871 May 3.	R.	Ghosh, Káliprasanna. <i>Calcutta.</i>
1869 Feb. 3.	R.	Ghosh, Pratápachandra, B. A. <i>Calcutta.</i>
1870 May 4.	R.	Ghoshál, Rájá Satyánand. <i>Calcutta.</i>

Date of Election.		
1880 Aug. 4.	R.	Gibbs, The Hon. James, C. S. I., C. I. E., F. R. G. S., M. R. A. S., Member of the Governor-General's Council. <i>Calcutta</i> .
1884 Dec. 3.	N.R.	Giles, George M., M. B., F. R. C. S., Surgeon Naturalist, S. S. "Investigator." <i>Sandoway</i> .
1875 July 7.	N.R.	Girdlestone, Charles Edward Ridgway, c. s., Resident. <i>Katmandu, Nepal</i> .
1861 Feb. 5.	F.M.	Godwin-Austen, Lieut.-Colonel H. H., F. R. S., F. Z. S., F. R. G. S. <i>Europe</i> .
1882 May 3.	R.	Golam Sarwar, Maulavi. <i>Calcutta</i> .
1862 July 2.	N.S.	Gordon, Robert, c. E., Executive Engineer, P. W. D. <i>Europe</i> .
1881 Mar. 2.	R.	Gosain, Hem Chunder. <i>Calcutta</i> .
1863 Nov. 4.	F.M.	Gowan, Major-General J. Y. <i>Europe</i> .
1879 Jan. 8.	N.R.	Gowan, Major W. E. <i>Simla</i> .
1877 Nov. 7.	L.M.	Grant, Alexander, M. I. C. E., Director of State Railways. <i>Europe</i> .
1876 Nov. 15.	N.R.	Grierson, George Abraham, c. s. <i>Bankipur</i> .
1861 Sept. 4.	N.S.	Griffin, Sir Lepel Henry, c. s., K. C. S. I. <i>Europe</i> .
1861 Feb. 6.	N.R.	Growse, Frederick Salmon, M. A., c. s., C. I. E., Magistrate and Collector. <i>Fatehpur, N. W. P.</i>
1880 Feb. 4.	R.	Gupta, Behárilál, c. s. <i>Calcutta</i> .
1883 June 6.	N.R.	Gurdýál Singh, Sirdár, c. s., Asst. Commissioner. <i>Hoshiarpur, Panjab</i> .
1867 July 3.	N.S.	Hacket, Charles Augustus, Assistant Geol. Survey of India. <i>Camp Abu, Rajputana</i> .
1883 Jan. 3.	N.R.	Harding, Francis Henry, B. A., c. s. <i>Europe</i> .
1879 Mar. 5.	R.	Harraden, S. <i>Calcutta</i> .
1877 Sep. 27.	R.	Hart, J., Attorney-at-Law. <i>Calcutta</i> .
1875 Mar. 3.	N.S.	Hendley, Surgeon Major Thomas Holbein. <i>Europe</i> .
1875 Aug. 4.	N.R.	Hewitt, James Francis Katherinus, c. s., Commissioner. <i>Chota Nagpur</i> .
1883 May 2.	N.R.	Hill, Samuel Alexander, B. SC., A. R. S. M., F. C. S., Prof. of Physical Science, Muir College and Meteor. Reporter to Govt., N. W. P. and Oudh. <i>Allahabad</i> .
1872 Dec. 4.	R.	Hoernle, Rev. A. F. R., PH. D., Principal of the Madrasah. <i>Calcutta</i> .
1878 Mar. 6.	N.R.	Hoey, W. <i>Lucknow</i> .
1884 Mar. 5.	N.R.	Holdsworth-Fisher, John, Professor, Hooghly College. <i>Chinsurah</i> .
1884 Mar. 5.	N.R.	Hooper, John, c. s., Settlement Officer. <i>Basti, N. W. P.</i>
1873 Jan. 8.	L.M.	Houstoun, G. L., F. G. S. <i>Europe</i> .
1863 Jan. 15.	N.R.	Howell, Mortimer Sloper, c. s. <i>Mirzapur, N. W. P.</i>
1878 Sep. 25.	N.R.	Hughes, G., c. s. <i>Rupar, Amballa</i> .
1867 Aug. 7.	N.R.	Hughes, T. H., A. R. S. M., F. G. S., Geol. Survey of India. <i>Kutni, F. I. E.</i>

Date of Election.		
1866 Jan. 17.	N.S.	Hughes, Major W. G., M. S. C. <i>Europe.</i>
1870 Jan. 5.	N.R.	Hume, Allan Octavian, C. B., C. S. <i>Allahabad.</i>
1884 May 2.	N.R.	Hussein, Syud, B. A., Secy. to Nizam of Hyderabad's Council.
1872 Dec. 4.	N.R.	Ibbetson, Denzil Charles Jelf, C. S. <i>Lahore.</i>
1866 Mar. 7.	N.R.	Irvine, William, C. S., Magistrate and Collector. <i>Ghazipur.</i>
1884 May 2.	N.R.	Iskander Ali Mirza, Prince. <i>Murshedabad.</i>
1853 Dec. 7.	N.R.	Isvariprasad Singh, Maharaja, G. C. S. I. <i>Benares.</i>
1874 Feb. 4.	R.	Jackson, Surgeon Major Charles Julian J. <i>Calcutta.</i>
1880 Dec. 1.	N.S.	Jackson, William Grierson, B. C. S. <i>Europe.</i>
1869 Aug. 4.	R.	Jahán Qadr Muhammad Wáhid Alí, Bahádur, Prince. <i>Garden Reach, Calcutta.</i>
1876 July 5.	N.S.	Jarrad, Lieut. F. W., R. N., F. R. A. S., Marine Survey Dept. <i>Europe.</i>
1879 Mar. 5.	R.	Jarrett, Lt.-Col. H. S., B. S. C., Secy. to the Board of Examiners. <i>Calcutta.</i>
1881 Feb. 2.	N.R.	Jenkins, Capt. Thomas Morris, M. S. C., Asst. Commissioner and J. P. for Burmah. <i>Bassein.</i>
1862 Mar. 5.	N.R.	Johnstone, Lieut.-Colonel James William Hope, Commissioner. <i>Europe.</i>
1867 Dec. 4.	N.S.	Johnstone, Lt.-Col. James, Political Agent. <i>Europe.</i>
1878 Aug. 7.	N.R.	Johnstone, P. DeLacy, C. S.
1873 Dec. 3.	N.R.	Johore, H. H. the Maharájá of, K. C. S. I. <i>New Johore, Singapore.</i>
1884 Aug. 6.	N.R.	Jones, E. J., Geol. Survey of India. <i>Ohhindwara.</i>
1875 Nov. 3.	N.R.	Jones, S. S., B. A., C. S. <i>Santhal Pergunnahs.</i>
1869 April 7.	R.	Kabiruddín Ahmad, Maulavi. <i>Calcutta.</i>
1882 Mar. 1.	R.	Kennedy, Pringle, M. A. <i>Calcutta.</i>
1874 Dec. 2.	N.R.	Khudábaksh, Khan Bahadur, Maulavi. <i>Bankipur.</i>
1884 Nov. 5.	N.R.	Kitts, Eustace John, C. S. <i>Azamgarh, N. W. P.</i>
1867 Dec. 4.	R.	King, G., M. B., F. L. S., Supdt., Royal Botanic Garden. <i>Sibpur.</i>
1881 Mar. 2.	N.R.	King, Lucas White, B. A., LL. B., C. S., <i>Peshawar.</i>
1862 Jan. 15.	N.R.	King, W., Jr., B. A., F. G. S., Depy. Supdt. of Madras Geol. Survey of India. <i>Kutni, E. I. R.</i>
1880 Dec. 1.	N.S.	Kirtan, Surgeon-Major William Henry, F. L. S., Medical Store-Keeper. <i>Europe.</i>
1880 Jan. 7.	N.R.	Kisch, H. M., M. A., C. S. <i>Calcutta.</i>
1877 Jan. 17.	N.R.	Kishor, Kumara Radha Dev, Juvraj of Hill Tipperah. <i>Tipperah.</i>
1882 June 7.	N.R.	Kishore Singh, Maharaja Kumar Harendra. <i>Bettiah.</i>
1884 Sept. 3.	R.	Kumar Indra Chandra Singh of Paikparrah. <i>Calcutta.</i>
1883 Aug. 30.	N.R.	Kuster, E. E. A. <i>Darbhanga.</i>
1878 Oct. 4.	N.R.	Lachman Singh, Raja. <i>Bulandshahr.</i>
1884 Jan. 2.	R.	Lall, Rai Sohun. <i>Calcutta.</i>

Date of Election.		
1877 Sep. 27.	N.R.	La Touche, James John Digges, B. A., C. S. <i>Gorakhpur.</i>
1881 Feb. 2.	N.S.	Laughlin, Robert Campbell, Asst. Supdt., Govt. Telegraph Department. <i>Calcutta.</i>
1882 Dec. 6.	N.R.	Lawrence, Walter. <i>Abu, Rajputana.</i>
1881 Mar. 2.	N.R.	Lee, J. Bridges, M. A., F. G. S., F. C. S., F. Z. S., Barrister-at-law. <i>Lahore.</i>
1879 Dec. 3.	N.R.	Leonard, G. S., Traffic Superintendent, N. B. State Railway. <i>Saidpur.</i>
1880 July 7.	N.R.	Lewis, Rev. Arthur, B. A., Vice-Principal, St. John's Divinity School. <i>Lahore.</i>
1873 Feb. 5.	N.S.	Lewis, Timothy Richards, M. B., Special Asst. to the Sanitary Commissioner with the Government of India. <i>Europe.</i>
1881 Dec. 7.	N.S.	Logan, R., C. S. <i>Lahore.</i>
1866 Jan. 17.	F.M.	Low, James, Surveyor, G. T. Survey. <i>Europe.</i>
1869 July 7.	N.R.	Lyall, Charles James, B. A., C. S. <i>Shillong.</i>
1870 April 7.	L.M.	Lyman, B. Smith. <i>Northampton, Mass., U. S., America.</i>
1884 Dec. 3.	N.R.	McCabe, R. B., C. S. <i>Kohima, Naga Hills, Assam.</i>
1868 Dec. 2.	N.R.	Macauliffe, Michael, B. A., C. S., Judicial Assistant. <i>Gujrat, Fanzab.</i>
1880 June 2.	N.R.	Macdonald, James, C. E. <i>Rurki.</i>
1884 Mar. 5.	R.	Macdonnell, A. P., B. A., C. S., Offg. Secy., Govt. of Bengal. <i>Calcutta.</i>
1879 Feb. 5.	N.R.	Macgregor, Major C. R., F. R. G. S., 44th N. I. <i>Dibrugarh.</i>
1848 April 5.	L.M.	MacLagan, Major-General Robert, R. E., F. R. S. E., F. R. G. S. <i>Europe.</i>
1873 Dec. 3.	R.	MacLeod, Surgeon-Major Kenneth, M. D. <i>Calcutta.</i>
1880 May 5.	N.R.	MacLeod, Roderick Henry, B. C. S., Asst. Magte. <i>Kasia, Gorakhpur, N. W. P.</i>
1884 June 4.	R.	Macnair, Col. E. J. <i>Calcutta.</i>
1881 July 6.	R.	Mahomed Firukh Shah, Prince. <i>Calcutta.</i>
1882 Aug. 2.	R.	Mahomed Yusoof, Hon. Moulvie. <i>Calcutta.</i>
1867 April 3.	R.	Mainwaring, Major-General George Byres, S. C. <i>Serampur.</i>
1878 April 3.	R.	Mallet, F. R., Geological Survey of India. <i>Calcutta.</i>
1864 July 6.	R.	Mallik, Coomar Debendra. <i>Calcutta.</i>
1869 Sept. 1.	R.	Mallik, Yadulal. <i>Calcutta.</i>
1872 Nov. 6.	N.R.	Man, E. H., Asst. Supdt. <i>Nancowry, Nicobars.</i>
1880 May 5.	N.R.	Mandalik, The Hon. Rao Sahib Visvanath Narayana, C. S. I. <i>Bombay.</i>
1869 July 7.	N.R.	Markham, Alexander Macanlay, C. S., F. R. G. S., Collector. <i>Banda.</i>
1873 July 2.	N.R.	Marshall, C. W. <i>Gonatea, Synthia, Bengal.</i>
1877 Feb. 7.	N.S.	Marshall, Major Geo. Fred. Lycester, R. E., Asst. Secy., Govt. of India, P. W. D. <i>Europe.</i>

Date of Election.		
1860 Mar. 7.	R.	Medlicott, H. B., M. A., F. R. S., F. G. S., Supdt., Geological Survey of India. <i>Calcutta.</i>
1877 Mar. 7.	N.R.	Medlycott, Rev. Adolphus Edwin, PH. D., Military Chaplain, <i>Ferozepur, Panjab.</i>
1882 Dec. 6.	N.R.	Merk, W. R. H., C. S. <i>Lahore.</i>
1884 Nov. 5.	N.R.	Middlemiss, O. S. <i>Chakrata, N. W. P.</i>
1871 Sept. 6.	F.M.	Miles, Lieut.-Colonel S. B., S. C., Political Agent. <i>Muscat.</i>
1884 Sept. 3.	R.	Miles, William Harry. <i>Calcutta.</i>
1870 July 6.	R.	Miller, A. B., B. A., Barrister-at-law, Official Assignee. <i>Calcutta.</i>
1874 May 6.	N.R.	Minchin, F. J. V. <i>Aska, Ganjan.</i>
1875 Aug. 4.	N.R.	Minchin, Colonel, C. C. <i>Hissar, Panjab.</i>
1884 Dec. 3.	R.	Mirza Saraiya Jah Bahadur, Prince.
1856 Mar. 5.	R.	Mitra, Rájendralála, Rái Bahádur, LL. D., C. I. E. <i>Calcutta.</i>
1876 Dec. 6.	F.M.	Mockler, Major E., British Consul. <i>Basrah, Persian Gulf.</i>
1881 May 4.	N.R.	Molloy, Major Edward, 5th Goorkhas. <i>Abbotabad, Hazara, Panjab.</i>
1884 June 4.	R.	Moncreiffe, T. G. H. <i>Calcutta.</i>
1884 Apr. 2.	R.	Mondy, Edmund F., Civil Engineering Coll. <i>Sibpur.</i>
1881 Dec. 7.	N.R.	Monteath, J. J., M. D. <i>Silchar.</i>
1878 May 2.	N.R.	Moyle, J. C., Barrister-at-law. <i>Moulmein, Burmah.</i>
1864 Nov. 2.	N.R.	Muir, J. W., M. A., C. S., Barrister-at-law. <i>Mirzapore.</i>
1879 May 7.	N.R.	Mukerjea, Bhudeva, C. I. E. <i>Benares.</i>
1883 May 2.	R.	Mukerji, Rajkrishna, M. A., B. L., Bengali translator to Govt. <i>Calcutta.</i>
1867 Mar. 6.	R.	Mukerjea, The Hon. Pearimohan, M. A. <i>Uttarpara.</i>
1882 Jan. 4.	R.	Mukerji, Girijabhushan, M. A. <i>Calcutta.</i>
1880 Aug. 26.	R.	Mullick, Benod Behari. <i>Calcutta.</i>
1880 Aug. 26.	N.R.	Nag, Sib Chunder. <i>Bakarganj.</i>
1880 Dec. 1.	R.	Napier, J. R. <i>Calcutta.</i>
1882 Aug. 2.	N.R.	Narain Singh, Raja Ram. <i>Khyrah, Monyhyr.</i>
1876 May 4.	R.	Nash, A. M., M. A., Professor, Presidency College. <i>Calcutta.</i>
1881 Nov. 2.	R.	Nicéville, L. de. <i>Calcutta.</i>
1869 July 7.	N.R.	Nursing Rao, A. V. <i>Vizagapatam.</i>
1871 July 5.	N.S.	Oates, E. W., C. E., Engineer, P. W. D., Garrison Div., Sittang Canal. <i>Europe.</i>
1879 Aug. 28.	N.S.	Oldham, Surgeon-Major C. F., F. R. G. S. <i>Europe.</i>
1883 Dec. 1.	N.R.	Oldham, R. D., A. R. S. M., Asst., Geol. Sur. of India.
1883 Aug. 30.	N.R.	Oliver, Edw. Emmerson, M. I. C. E., Asst. Secy. to Govt. Panjab, P. W. D. <i>Lahore.</i>
1880 Aug. 4.	L.M.	Pandia, Pandit Mohanlall Vishnulall, F. R. S., Member and Secy., Royal Council of Meywar. <i>Oodeypnr.</i>
1880 Jan. 7.	R.	Pargiter, Frederick E., B. A., C. S., Officiating Commissioner of the Sundarbans. <i>Calcutta.</i>

Date of Election.		
1880 Jan. 7.	N.R.	Parry, J. W., C. E., Assoc. M. I. C. E., Asst. Engineer. <i>Nundial, via Ouddapah, Madras.</i>
1862 May 7.	L.M.	Partridge, Surgeon-Major Samuel Bowen, M. D. <i>Europe.</i>
1871 Dec. 6.	N.R.	Peal, S. E. <i>Sibsagar, Assam.</i>
1860 Feb. 1.	F.M.	Pearse, Major-General G. G., C. B., R. H. A. <i>Europe.</i>
1873 Aug. 6.	R.	Pedler, Alexander, F. C. S., Professor of Chemistry, Presidency College. <i>Calcutta.</i>
1864 Mar. 2.	N.S.	Pellow, Fleetwood Hugo, C. S. Offg. Commissioner. <i>Europe.</i>
1865 Sept. 6.	N.R.	Peppé, T. F. <i>Arrah.</i>
1881 Aug. 25.	R.	Percival, Hugh Melville, M. A., Professor, Presidency College. <i>Calcutta.</i>
1883 Jan. 3.	N.R.	Plowden, Major Trevor C. <i>Simla.</i>
1877 Aug. 1.	N.R.	Peters, C. T., M. B., Surgeon-Major. <i>Bombay.</i>
1868 May 6.	R.	Peterson, F. W., F. C. S., <i>H. M.'s Mint, Calcutta.</i>
1835 July 1.	N.S.	Phayre, Sir Arthur Purves, K. C. S. I., C. B. <i>Europe.</i>
1872 Dec. 4.	R.	Pránnáth Sarasvati, Pandit, M. A., B. L. <i>Bhowanipur.</i>
1890 June 2.	N.R.	Prasad Sinh, Thakur Garuradhawaya, Raja of Beswan. <i>Beswan Fort, Aligarh.</i>
1877 Aug. 30.	N.R.	Pratap Singh, Depy. Magte. <i>Bankura.</i>
1881 Feb. 2.	R.	Prichard, Major William Francis, B. S. C. <i>Calcutta.</i>
1880 April 7.	R.	Rai, Bipina Chandra, B. L. <i>Calcutta.</i>
1877 May 2.	N.S.	Ravenshaw, Thomas Edw., C. S. <i>Europe.</i>
1877 Aug. 1.	N.R.	Rees, J. C., Asst. Engr., P. W. D. <i>Thonzai, British Burmah.</i>
1871 July 5.	N.R.	Reid, James Robert, C. S., Collector. <i>Bareilly, Rohilcund.</i>
1881 Mar. 2.	R.	Reynolds, The Hon'ble Herbert John, B. A., C. S. <i>Calcutta.</i>
1880 Aug. 4.	N.R.	Reynolds, Herbert William Ward, C. S. <i>Allahabad.</i>
1884 Mar. 5.	N.R.	Risley, H. H., B. A., C. S., Depy. Comr. <i>Manbhoom.</i>
1860 Jan. 3.	N.R.	Rivett-Carnac, John Henry, C. S., C. I. E., F. S. A., Opium Agent. <i>Ghazipur.</i>
1878 Sept. 25.	R.	Robertson, Rev. J. <i>Calcutta.</i>
1865 Feb. 1.	N.S.	Robinson, S. H. <i>Europe.</i>
1881 Aug. 30.	R.	Roy, Nanda Kumar. <i>Calcutta.</i>
1880 Sept. 30.	N.R.	Sage, E. M., Asst. Engineer, P. W. D. <i>Tavoy, British Burmah.</i>
1877 May 2.	N.R.	Sandford, W., Rajputana-Malwa Railway. <i>Ajmere, Rajputana.</i>
1870 May 4.	R.	Schlich, Dr. W. <i>Calcutta.</i>
1884 April 2.	N.R.	Scotland, John Parry, C. E., Ex. Engineer. <i>Buzar.</i>
1874 July 1.	R.	Scully, Dr. John. <i>H. M.'s Mint, Calcutta.</i>
1878 Mar. 6.	R.	Sen, Adharlal, B. A. <i>Calcutta.</i>
1874 Dec. 2.	N.R.	Sen, Dr. Rám Dás. <i>Berhampur.</i>
1882 June 7.	F.M.	Senart, Emile, Membre de l'Institut de France. <i>Paris.</i>

Date of Election.		
1882 Aug. 2.	R.	Serajul Islam, Maulavi. <i>Calcutta.</i>
1879 Jan. 8.	N.R.	Sewell, R., M. C. S. <i>Madras.</i>
1878 May 2.	R.	Sharpe, C. J. <i>Calcutta.</i>
1879 May 7.	N.S.	Sheridan, C. J., C. E. <i>Europe.</i>
1881 Mar. 2.	N.R.	Shopland, E. R., Indian Marine, Port Officer. <i>Akyab.</i>
1882 May 3.	N.R.	Shyamaldass, Kavirāja, Private Secy. to H. H. the Mahārājā of Udaipur. <i>Udaipur.</i>
1878 April 3.	R.	Simson, A. <i>Calcutta.</i>
1867 April 3.	R.	Sirkār, Dr. Mahendralāla. <i>Calcutta.</i>
1872 Aug. 5.	N.S.	Skrefsrud, Rev. L. O., Indian Home Mission to the Santhāls. <i>Europe.</i>
1864 Sept. 7.	N.R.	Sladen, Col. E. B., M. S. C. <i>Akyab.</i>
1874 June 3.	N.R.	Smith, Vincent Arthur, C. S., Settlement Officer. <i>Basti, N.-W. P.</i>
1872 July 3.	N.R.	Stephen, Carr, B. L., Judl. Asst. Commr. <i>Ludianah.</i>
1879 Oct. 2.	N.S.	Sterndale, R. A., F. R. G. S., Asst. Commr. of Currency. <i>Europe.</i>
1882 May 3.	R.	Stewart, H. E. Sir Donald M., Bart., G. C. B., G. C. S. I., Commander-in-Chief. <i>Calcutta.</i>
1878 July 3.	N.R.	St. Barbe, H. L., C. S. <i>Bussein, British Burmah.</i>
1876 Aug. 2.	N.R.	St. John, Lieut.-Col. Sir Oliver Beauchamp, R. E., K. C. S. I., Officer on special duty. <i>Kashmir.</i>
1880 Nov. 3.	N.R.	Sturt, Lieut. Robert Ramsay Napier, B. S. C., Panjab Frontier Force. <i>Kohar.</i>
1884 Mar. 5.	N.R.	Swinhoe, Lieut.-Col. C., B. S. C., Asst. Comy. Genl. <i>Bombay.</i>
1864 Aug. 11.	R.	Swinhoe, W., Attorney-at-Law. <i>Calcutta.</i>
1880 Nov. 3.	N.R.	Swynnerton, R. A. C. S. I. <i>Naushera.</i>
1880 June 2.	N.S.	Sykes, John Gastrell, LL. B., Barrister-at-Law and Advocate, High Court, N. W. P. <i>Europe.</i>
1868 June 3.	R.	Tagore, The Hon'ble Mahārājā Jotendra Mohun, K. C. S. I. <i>Calcutta.</i>
1865 Sept. 6.	N.S.	Tawney, C. H., M. A., Principal, Presidency College. <i>Europe.</i>
1874 Mar. 4.	N.S.	Taylor, Commander A. D., late Indian Navy. <i>Europe.</i>
1884 May 5.	N.R.	Taylor, W. C., Settlement Officer, Khurda. <i>Orissa.</i>
1860 May 2.	N.S.	Temple, Sir R., Bart., K. C. S. I., C. I. E., B. C. S. <i>Europe.</i>
1878 June 5.	N.R.	Temple, Capt., R. C., S. C. <i>Ambala.</i>
1876 Feb. 2.	R.	Tennant, Major-General James Francis, R. E., F. R. S., C. I. E., Mint Master. <i>Europe.</i>
1875 June 2.	N.R.	Thibaut, Dr. G., Professor, Sanskrit College. <i>Benares.</i>
1869 Oct. 6.	N.R.	Thomson, A., The College. <i>Agra.</i>
1875 Nov. 3.	N.R.	Thomson, Robert George, C. S., Asst. Comr. <i>Jhelum, Panjab.</i>
1847 June 2.	L.M.	Thuillier, Major-Genl. Sir Henry Edward Landor, R. A., C. S. I., F. R. S. <i>Europe.</i>

Date of Election.		
1883 June 6.	N.R.	Toker, Lieut.-Col. Alliston Champion, B. S. C., 18th N. I. <i>Dinapoor.</i>
1871 April 5.	F.M.	Trefftz, Oscar. <i>Europe.</i>
1861 June 5.	L.M.	Tremlett, James Dyer, M. B., C. S., Commissioner. <i>Delhi.</i>
1884 Mar. 5.	R.	Trevor, the Hon'ble Col. S. T., R. E., Chief Engr. and Secy. to Govt. of Bengal, P. W. D. <i>Calcutta.</i>
1872 July 3.	R.	Trevor, Colonel William Spottiswoode, R. E. with the Supreme Govt. <i>Calcutta.</i>
1880 Mar. 3.	N.R.	Tufnell, Lieut. R. H. C., 30th M. N. I. <i>Madras.</i>
1863 May 6.	N.R.	Tyler, J. W., M. D., F. R. C. S., Supdt., Central Prison. <i>Agra.</i>
1865 Nov. 1.	R.	Waldie, David, F. C. S. <i>Calcutta.</i>
1865 May 3.	R.	Waterhouse, Major James, B. S. C., Dy. Supdt., Survey of India. <i>Calcutta.</i>
1874 July 1.	R.	Watt, Dr. George. <i>Calcutta.</i>
1876 Dec. 6.	R.	Webb, W. T., M. A., Professor, Presidency College. <i>Calcutta.</i>
1879 Mar. 5.	N.R.	Weekes, A., C. S., Magistrate and Collector. <i>Purneah.</i>
1869 Sept. 1.	R.	Westland, James, C. S., Comptroller-General. <i>Calcutta.</i>
1867 Feb. 6.	R.	Westmacott, Edward Vesey, B. A., C. S. <i>Calcutta.</i>
1875 Feb. 3.	N.R.	Whiteway, Richard Stephen, C. S., Settlement Officer. <i>Ajmere and Merwara.</i>
1878 Aug. 29.	N.S.	Whittall, R., Forest Dept. <i>Europe.</i>
1873 May 7.	N.R.	Williams, George Robert Carlisle, B. A., C. S., Depy. Commissioner. <i>Jhansi.</i>
1880 Feb. 4.	N.S.	Wilson, The Hon. Arthur. <i>Europe.</i>
1870 Aug. 3.	N.R.	Wilson, Robert Henry, B. A., C. S. <i>Calcutta.</i>
1878 Mar. 6.	N.R.	Wilson, J., C. S. <i>Gurgaon, Punjab.</i>
1866 Mar. 7.	L.M.	Wise, Dr. J. E. N. <i>Rostellan, County Cork, Ireland.</i>
1870 Jan. 5.	N.S.	Wood-Mason, James. <i>Calcutta.</i>
1873 Aug. 6.	N.R.	Woodthorpe, Lieut.-Col. Robert Gossett, R. E., Asst. Supdt., Survey of India. <i>Camp via Dibrugarh, Upper Assam.</i>

SPECIAL HONORARY CENTENARY MEMBERS.

Date of Election.	
1884 Jan. 15.	James Prescott Joule, Esq., LL. D., F. R. S. <i>Manchester.</i>
1884 Jan. 15.	Dr. Ernst Haeckel, Professor in the University of Jena.
1884 Jan. 15.	Charles Meldrum, Esq., M. A., F. R. S. <i>Mauritius.</i>
1884 Jan. 15.	A. H. Sayce, Esq., Professor of Comp. Philology, <i>Oxford.</i>
1884 Jan. 15.	M. Emile Senart, Member of the Institute of France, <i>Paris.</i>
1884 Jan. 15.	Monier Williams, Esq., Boden Prof. of Sanskrit, <i>Oxford.</i>

HONORARY MEMBERS.

1847 Nov. 3.	His Highness the Nawáb Nazim of Bengal. <i>Europe.</i>
1848 Feb. 2.	Sir J. D. Hooker, K. C. S. I., C. B., M. D., D. C. L., F. R. S. F. G. S. <i>Kew.</i>
1853 April 6.	Major-General H. C. Rawlinson, K. C. B., D. C. L., F. R. S. <i>London.</i>
1858 July 6.	B. H. Hodgson. <i>Europe.</i>
1860 Mar. 7.	Professor Max Müller. <i>Oxford.</i>
1860 Nov. 7.	Edward Thomas, F. R. S. <i>London.</i>
1860 Nov. 7.	Dr. Aloys Sprenger. <i>Heidelberg.</i>
1860 Nov. 7.	Dr. Albrecht Weber. <i>Berlin.</i>
1868 Feb. 5.	General A. Cunningham, C. S. I. <i>India.</i>
1868 Feb. 5.	Professor Bápu Deva Sástri. <i>Benares.</i>
1868 Sept. 2.	A. Grote. <i>London.</i>
1872 May 1.	Sir G. B. Airy, K. C. B., M. A., D. C. L., LL. D., F. R. S. <i>London.</i>
1872 June 5.	Prof. T. H. Huxley, LL. D., PH. D., F. R. S., F. G. S., F. Z. S., F. L. S. <i>London.</i>
1875 Nov. 3.	Dr. O. Böhtlingk. <i>Jena.</i>
1875 Nov. 3.	Prof. J. O. Westwood. <i>Oxford.</i>
1876 April 5.	Col. H. Yule, R. E., C. B. <i>London.</i>
1876 April 5.	Dr. Werner Siemens. <i>Berlin.</i>
1879 June 4.	Prof. E. B. Cowell, D. C. L. <i>Cambridge.</i>
1879 June 4.	Dr. A. Günther, V. P. R. S. <i>London.</i>
1879 June 4.	Dr. J. Janssen. <i>Paris.</i>
1879 June 4.	Prof. H. Milne-Edwards. <i>Paris.</i>
1879 June 4.	Prof. P. Regnaud. <i>Lyons.</i>
1879 June 4.	E. Renan. <i>Paris.</i>
1881 Dec. 7.	Professor Hermann L. F. Helmholtz. <i>Berlin.</i>
1881 Dec. 7.	Dr. Rudolph v. Roth. <i>Tübingen.</i>
1881 Dec. 7.	Sir William Thomson, Knt., LL. D., F. R. S., F. R. S. E. <i>Glasgow.</i>
1881 Dec. 7.	Professor William Wright, LL. D. <i>Cambridge.</i>
1883 Feb. 7.	W. T. Blanford, A. R. S. M., F. R. S., F. G. S., F. R. G. S. <i>London.</i>
1883 Feb. 7.	Alfred Russell Wallace, F. L. S., F. R. G. S. <i>Godalming.</i>
1883 Feb. 7.	Prof. William Dwight Whitney. <i>Newhaven, Connecticut,</i> <i>U. S.</i>

CORRESPONDING MEMBERS.

Date of Election.			
1844	Oct.	2.	Macgowan, Dr. J. <i>Europe.</i>
1856	July	2.	Krämer, A. von. <i>Alexandria.</i>
1856	„	2.	Porter, Rev. J. <i>Damascus.</i>
1856	„	2.	Smith, Dr. E. <i>Beirut.</i>
1856	„	2.	Taylor, J., Esq. <i>Bussorah.</i>
1857	Mar.	4.	Nietner, J., Esq. <i>Ceylon.</i>
1858	„	3.	Schlagintweit, R. von. <i>Giessen.</i>
1859	Nov.	2.	Frederick, Dr. H. <i>Batavia.</i>
1860	Feb.	1.	Baker, The Rev. H. <i>E. Malabar.</i>
1861	July	3.	Gösche, Dr. R.
1862	Mar.	3.	Murray, A., Esq. <i>London.</i>
1863	July	4.	Barnes, R. H., Esq. <i>Ceylon.</i>
1866	May	7.	Schlagintweit, Prof. E. von. <i>Berlin.</i>
1868	„	5.	Holmböe, Prof. <i>Christiana.</i>

ASSOCIATE MEMBERS.

1865	May	3.	Dall, Rev. C. H. <i>Calcutta.</i>
1874	Feb.	4.	Schaumburgh, J., Esq. <i>Calcutta.</i>
1874	April	1.	Lafont, Rev. Fr. E., S. J., C. I. E. <i>Calcutta.</i>
1884	Aug.	6.	F. Moore, F. R. S., F. L. S. <i>London.</i>
1875	Dec.	1.	Bate, Rev. J. D. <i>Allahabad.</i>
1875	„	1.	Maulavi Abdul Hai, <i>Madrasah. Calcutta.</i>
1882	June	7.	Giles, Herbert, Esq. <i>Europe.</i>
1883	Feb.	7.	Rodgers, C. J. <i>Amritsar.</i>

LIST OF MEMBERS WHO HAVE BEEN ABSENT FROM INDIA THREE YEARS AND UPWARDS.*

* *Rule 40.*—After the lapse of 3 years from the date of a Member leaving India, if no intimation of his wishes shall in the interval have been received by the Society, his name shall be removed from the List of Members.

The following Members will be removed from the next Member List of the Society under the operation of the above Rule :

G. W. Allen, Esq., C. I. E.
J. Low, Esq.
T. E. Ravenshaw, C. S.

LOSS OF MEMBERS DURING 1884.

BY RETIREMENT.

H. O. Levinge, Esq., c. s.
 C. Robertson, Esq., c. s.
 Dr. W. K. Waller.
 Col. J. Sconce.
 T. Blissett, Esq.
 R. Maconachie, Esq.
 Major J. Van Someren.
 Lieut.-General J. T. Walker.
 Hon'ble J. O'Kinealy.
 A. J. L. Cappel, Esq.
 W. G. Olpherts, Esq.
 J. C. Parker, Esq.
 Hon'ble H. T. Prinsep.
 Syud Amir Hussein, Khan Bahadur.
 Babu Ramkrishna.
 R. R. Pope, Esq.
 Monsieur E. Van Eetvelde.

BY DEATH.

Ordinary Members.

Sir E. C. Bayley.
 Dr. H. W. McCann, (*late General Secretary*).
 J. B. Chalmers, Esq.
 R. Pawsey, Esq.

BY REMOVAL.

Under Rule 40.

R. M. Adam, Esq.
 Major J. Herschell.
 Sir L. S. Jackson.
 F. Jones, Esq.
 Sir J. Strachey.

[APPENDIX.]

ABSTRACT STATEMENT
OF
RECEIPTS AND DISBURSEMENTS
OF THE
ASIATIC SOCIETY OF BENGAL
FOR
THE YEAR 1884.

STATEMENT

Asiatic Society

Dr.

To ESTABLISHMENT.									
Salaries	...	...	...	...	Rs.	4,171	13	9	
Commission	...	...	...	...	...	333	3	10	
Pension	...	...	...	...	...	18	0	0	
						4,523	1	7	
To FURNITURE.									
An office timepiece	...	...	...	...	...	67	8	0	
						67	8	0	
To CONTINGENCIES.									
Centenary Dinner	...	...	...	...	...	909	6	0	
Stationery	...	...	...	...	...	206	9	9	
Lighting	...	...	...	...	...	93	8	0	
Building	...	...	...	...	...	902	8	0	
Taxes	...	...	...	...	...	720	0	0	
Postage	...	...	...	...	...	599	11	0	
Freight	...	...	...	...	...	18	0	0	
Meetings	...	...	...	...	...	93	8	0	
Miscellaneous	...	...	...	...	...	225	11	9	
						3,768	14	6	
To LIBRARY AND COLLECTIONS.									
Books	...	...	...	...	...	1,497	7	4	
Local Periodicals	...	...	...	...	...	96	1	0	
Binding	...	...	...	...	...	409	12	0	
Coins	...	...	...	...	...	139	12	0	
Catalogue	...	...	...	...	...	1,383	0	0	
						3,526	0	4	
To PUBLICATIONS.									
Centenary Review	...	...	...	...	...	941	8	9	
Journal, Part I	...	...	...	...	...	2,312	14	0	
Journal, Part II	...	...	...	...	...	1,514	9	9	
Proceedings	...	...	...	...	...	1,806	0	3	
						6,075	0	9	
To Printing charges of circulars, receipts, forms, &c.						145	12	0	18,106 5 2
To PERSONAL ACCOUNTS (Writes off and Miscellaneous)						.....			527 6 0
To Balance	...	...	...	...	...	.....			1,42,957 9 5
Total Rs.						...	1,61,591	4	7

No. 1. of Bengal.

	Cr.			
By Balance from last Report	Rs. 1,43,083 15 0
BY CASH RECEIPTS.				
Publications sold for Cash	1,232 10 5
Interest on Investments	6,211 2 3
Advances recovered	4 7 0
Miscellaneous	443 6 1
				<u>7,891 9 9</u>
BY PERSONAL ACCOUNT.				
Admission fees	816 0 0
Subscriptions	9,126 0 0
Sales on credit,	448 0 0
Miscellaneous,	225 11 10
				<u>10,615 11 10</u>
Total Income	18,507 5 7

Total Rs. ... 1,61,591 4 7

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, }
J. C. DOUGLAS, } Auditors.

STATEMENT

Oriental Publication Fund in Account

Dr.

To CASH EXPENDITURE.

Printing charges	...	...	...	...	Rs. 5,867 15 0
Editing charges	...	...	...	...	3,318 14 0
Salaries	...	...	...	...	1,221 8 0
Advertizing	...	...	...	...	120 0 0
Binding	...	...	...	...	21 4 0
Freight	...	...	...	...	17 0 0
Stationery	...	...	...	...	7 4 0
Postage	...	...	...	...	275 5 3
Contingencies	...	...	...	...	29 3 0
Commission on collecting Bills	...	...	...	...	13 9 6
					10,891 14 9
To PERSONAL ACCOUNT (Writes off and Miscellaneous)	...	...	...	...	11 4 0
Total Expenditure					10,903 2 9
To Balance	...	...	...	...	21,408 13 8
					Total Rs. ... 32,312 0 5

No. 2.

with the Asiatic Society of Bengal.

Cr.

By Balance from last Report Rs. 18,968 1 5
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BY CASH RECEIPTS.

Government Allowances	Rs. 9,000 0 0
Publications sold for Cash	1,698 7 3
Advances recovered ...	...	...	...	52 4 6
Interest on Investments	...	...	...	789 11 6
				<hr/>
				11,540 7 3
				<hr/>

BY PERSONAL ACCOUNT.

Sales on credit	1,758 13 9
Miscellaneous	44 10 0
					<hr/>
					1,803 7 9

Total Income	<hr/>	13,343 15 0
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Total Rs. ...	<hr/>	32,312 0 5
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F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON,	} <i>Auditors.</i>
J. C. DOUGLAS,	

STATEMENT

Sanskrit Manuscript Fund in Account

Dr.

To CASH EXPENDITURE.

Salaries	Rs. 1,507 0 0
Travelling expenses ... ..	... 158 5 6
Printing ... ..	... 1,062 2 0
Copying ... ..	... 105 5 9
Stationery ... ..	... 20 0 0
Postage ... ..	... 71 2 0
Freight ... ..	... 5 0 0
Commission ... ..	... 7 3 0
Contingencies ... ..	... 243 5 3
Purchase of MSS. ... ..	... 484 10 0
Binding ... ..	... 80 12 0
Total Expenditure	<hr/> 3,744 13 6

Total Rs. ...

3,744 13 6

No. 3.

with the Asiatic Society of Bengal.

Cr.

By Balance from last Report	Rs.	285	13	3
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BY CASH RECEIPTS.

Government Allowance	Rs.	3,200	0	0
Publications sold for Cash	30	12	0
Advances recovered ...	...	...	...	...	0	15	6
Interest on Investments	...	...	...	...	0	10	3
					<hr/>		
					3,232	5	9
					<hr/>		

BY PERSONAL ACCOUNT.

Publications sold on credit ...	...	...	...	...	46	0	0
				Total Income	<hr/>		
				By Balance	.....	180	10
						5	9
					<hr/>		
				Total Rs. ...	3,744	13	6
					<hr/>		

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, }
 J. C. DOUGLAS, } *Auditors.*

STATEMENT

Personal

Dr.

To Balance from last Report	Rs.	60	7	4
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To CASH EXPENDITURE.

Advances for purchase of Sanskrit MSS., postage of Books

to Members, &c. ...	...	...	...	Rs.	4,604	12	6
To Asiatic Society ...	...	...	...	...	10,615	11	10
To Oriental Publication Fund	1,803	7	9
To Sanskrit MSS. Fund	46	0	0
					<hr/> 17,070 0 1		

Total Rs. ...	17,130	7	5
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No. 4.

Account.

Cr.

By Cash Receipts	Rs. 12,755 12 9
By Asiatic Society	527 6 0
By Oriental Publication Fund	11 4 0
	<hr/> 13,294 6 9

By Balances.	Due to the Society.			Due by the Society.		
Members	4,010	5	5	184	15	10
Subscribers to publications	29	2	6	41	14	0
Employees	30	0	0	250	0	0
Agents	395	4	10	..	..	..
Miscellaneous	57	11	0	209	9	3
	4,522	7	9	686	7	1

3,836 0 8

 Total Rs. ... 17,130 7 5

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, }
 J. C. DOUGLAS, } *Auditors.*

STATEMENT

Invest

Dr.

		Nominal.	Actual.
To Balance from last Report ...	...	Rs. 1,58,800 0 0	1,58,279 12 9
Total Rs. ...		<u>1,58,800 0 0</u>	<u>1,58,279 12 9</u>

STATEMENT

Trust

Dr.

To Servants' pension ...	...	Rs. 48 0 0
To Balance (Servants' Pension Fund) ...	...	1,006 1 4
Total Rs. ...		<u>1,054 1 4</u>

No. 5.

ments.

Cr.

	Nominal.	Actual.
By Balance	Rs. 1,58,800 0 0	1,58,279 12 9
Total Rs. ...	1,58,800 0 0	1,58,279 12 9

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, } *Auditors.*
 J. C. DOUGLAS, }

No. 6.

Funds.

Cr.

By Balance from last Report	Rs. 1,014 1 4
By Interest on Investments	40 0 0
Total Rs. ...	1,054 1 4

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON } *Auditors.*
 J. C. DOUGLAS, }

STATEMENT

Cash.

Dr.					
To Balance from last Report	...	...	...	Rs.	5,011 10 11

RECEIPTS.

To Asiatic Society	...	...	...	...	8,721 15 6
To Oriental Publication Fund	...	...	...	...	11,540 7 3
To Sanskrit Manuscripts Fund	...	...	...	...	3,232 5 9
To Personal Account	...	...	...	...	12,755 12 9
To Trust Funds	...	...	...	...	40 0 0
Total Rs.					41,302 4 2

STATEMENT

Balance

Dr.					
To Cash	...	...	...	Rs.	3,076 0 6
To Sanskrit Manuscripts Fund	...	...	...	...	180 10 6
To Personal Account	...	...	...	...	3,836 0 8
To Investments	...	...	...	...	1,58,279 12 9
Total Rs.					1,65,372 8 5

No. 7.

Cr.

EXPENDITURE.

By Asiatic Society	...	...	...	...	Rs. 18,936 10 11
By Oriental Publication Fund	...	...	...	...	10,891 14 9
By Sanskrit Manuscripts Fund	...	...	...	...	3,744 13 6
By Personal Account...	...	...	...	...	4,604 12 6
By Trust Funds	...	...	...	...	48 0 0
By Balance	...	...	...	...	3,076 0 6

Total Rs. ... 41,302 4 2

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, } *Auditors.*
J. C. DOUGLAS, }

No. 8.

Sheet.

Cr.

By Asiatic Society	...	...	...	...	Rs. 1,42,957 9 5
By Oriental Publication Fund	...	...	...	...	21,408 13 8
By Trust Fund	...	...	...	...	1,006 1 4

Total Rs. ... 1,65,372 8 5

F. W. PETERSON,
Honorary Secretary and Treasurer,
Asiatic Society of Bengal.

E. F. T. ATKINSON, } *Auditors.*
J. C. DOUGLAS, }

Plate I, illustrating Dr. A. F. R. Hoernle's exhibition of Kashmiri Coins, will be issued with the March Number of the Proceedings.



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR JANUARY, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 7th January, 1885, at 9 P. M.

The Hon'ble J. GIBBS, Vice-President, in the Chair.

The minutes of the last meeting were read and confirmed.

Fourteen presentations were announced, as mentioned in the appended Library List.

The following gentlemen proposed and seconded at the last meeting were ballotted for and elected Ordinary Members :

1. A. E. Staley, Esq., C. S.
2. T. F. Bignold, Esq., C. S.
3. Colonel G. C. De Prée, S. C.

The following gentlemen are candidates for election at the next meeting :—

1. J. W. Oliver, Esq., proposed by H. F. Blanford, Esq., F. R. S., seconded by the Hon. J. Gibbs, C. S. I., C. I. E.
2. Babu Haraprasada Sastri, M. A., proposed by Babu P. C. Ghosha, B. A., seconded by Dr. R. L. Mitra, C. I. E.
3. Pandit Mahes Chandra Nyayaratna, proposed by Dr. A. F. R. Hoernle, seconded by Babu P. C. Ghosha, B. A.
4. Raja Surya Kumar Chandra, Bahadur, Mymensing, proposed by Dr. R. L. Mitra, C. I. E., seconded by Babu P. C. Ghosha, B. A.

The SECRETARY reported that he had appointed Mr. J. F. Duplessis, Assistant Secretary, vice Mr. Bion, resigned.

The following gentlemen have intimated their desire to withdraw from the Society :

1. S. S. Jones, Esq., C. S.
2. E. H. Man, Esq.

The PHILOLOGICAL SECRETARY reported that he had received several letters regarding the silver pieces belonging to Col. Clerk and exhibited at the August meeting of the Society, (see Proceedings for August, pp. 127, 128). It would be remembered, that both pieces bore inscriptions, which at that time no one had been able to decipher, though the general opinion seemed to be that they were in rude Greek or Páli characters. He had now much pleasure in informing the meeting, that with regard to one of the pieces—the narrow oblong one, ornamented with a ram's head, and figured on page 128 of the Proceedings for August—the mystery appears to have been solved by Mr. Beames, who first pointed out that they are evidently Semitic, and in particular some form of Aramaic. The subjoined extract from his letter, dated 18th November last, explains his view :—

“I have just received the August number of the Proceedings, regarding the coins sent by Col. Clerk figured on pp. 127, 128. I note that no one can as yet read the inscriptions, owing, I suppose, to their having only thought of Greek or Páli. It has apparently escaped notice that the characters are clearly Semitic, some form of Aramaic or Himyaritic, they do not quite agree with any form that I have seen, though I have compared them with a good many of the inscriptions figured in the *Zeitschrift d. D. M. G.* Those on the oblong block figured at the top of p. 128 of the Proceedings (which is probably an amulet to be worn round the neck) agree pretty closely with several of the inscriptions in Vol. XXIV of the *Zeitschrift*, and may almost be called Palmyrene. I read the letters *וחרבא* i. e., from right to left w, kh, d, b, a. From the word beginning with *ו* one would conjecture (if the language is also Semitic) that it was a continuation of a sentence running along all four faces of the amulet. But as of course you know Hazváresh and Pahlavi were written in Semitic characters, so the word may be Persian. I cannot make out the letters on the coin quite satisfactorily though I distinguish *5* several times, also *3* and *1*; one is tempted to read the word on the left hand side of the reverse as *לנך אגון* suggestive of the Ptolemies, but this is mere conjecture. I have no claim to much practice in reading coins, but perhaps this hint may be of use to experts in such matters.”

The PHILOLOGICAL SECRETARY then stated that he communicated Mr. Beames' letter to Colonel W. F. Prideaux, whose intimacy with Semitic inscriptions was well-known, and he would now read his reply, from

which it would be seen that he fully confirmed Mr. Beames' discovery though he modified the reading, originally suggested, in a few particulars, the result being, that the piece of silver was shown to bear the name of *Tiridates*, or some similar name. The following was Col. Prideaux's letter, dated 29th November, 1884:—

"I am very sorry that I can give no decided opinion on the inscriptions published in the August No. of the Proceedings. The characters do not exactly resemble any with which I am acquainted. Only one thing I can predicate with certainty: they are not Himyaritic. There is a certain "cachet" in Himyaritic epigraphy which can be detected at a glance by a practised eye. I quite agree with Mr. Beames that the characters are Semitic: they are, as he says, *some form of Aramaic*. They are, however, much earlier than the Palmyrene character, and I should be inclined to style them proto-Pahlavi, as they resemble to a certain extent the characters employed on the early Persic (sub-Parthian) coins of Fars, which were commented on by Levy some years ago in the *Zeitschrift d. D. M. G.* (Vol. XXI., p. 421). I don't think the first letter on the amulet is a 𐎠 (*waw*)—it is more like an archaic 𐎡 (*tet*). The second letter is pretty clearly 𐎢 (*cheth*), the next 𐎣 (*resh*) the next 𐎤 (*daleth*), and the last 𐎥 (*taw*). This would make T-kh-r-d-t (*Taklurdāt*), which might possibly be a provincial form of the name known to the Greeks as *Tiridates*. At any rate the termination "dat," about which there can be scarcely any doubt, implies a Persic name.

"I don't think the square piece is a coin. It is more probably an amulet or ornament. It would be labour thrown away to endeavour to interpret the inscription without seeing the original."

In a subsequently received letter, dated 12th December, 1884, Col. Prideaux added:

"I must confess my inability to make anything of this coin, or amulet, or whatever it is. The characters are of a different type from those on the smaller piece of silver and may be a rude imitation of Greek. I don't think it is a coin, and I have some doubts of its genuineness altogether.

"The smaller piece seems all right and the inscription is doubtless a man's name, ending in "dat." I cannot hit on anything more likely than what I suggested the other day, but there are of course difficulties in the way of accepting my reading."

The CHAIRMAN said: Colonel Clerk had sent the two pieces to him at Simla, and he came to the conclusion that they were spurious, and made most probably at Rawal Pindi, for they were composed of a mixture of metals, and bore traces of having been cast in sand moulds. There are some persons not far from that station who manufacture all kinds of coins and curiosities.

The following letter from Colonel Prideaux was also read by Dr. Hoernle :—

"I was much interested in reading Mr. Rodgers's Paper in the April No. of the Proceedings on "Some coins from Candahar," and especially in his remarks on the new and hitherto unknown coins of Sistan. I am, however, sceptical with regard to his King *Hardufi*, or *Harufi*. One can trust very little to representations of coins which are drawn by hand, but the inscription on his No. 21 (obverse) seems to me to be Táju-'d-Dín Ḥarb bin Muhammad. What Mr. Rodgers reads as "Hardufi," I read as "Ḥarb bin," and I should be disposed to ascribe it to the historical Ḥarb of coin No. 20. This was the King who reigned 60 years, so Khádim Ali says, and was a contemporary of Chengiz Khan and the Khalífa En Násir-ed-dín-ullah. As for the mysterious word which reads as قانن according to Mr. Rodgers, of course there was a Syriac month called Qánún, but at the same time the word on Mr. Rodgers's drawing of the coin might be read fifty ways."

The PHILOLOGICAL SECRETARY exhibited 60 copper coins sent by Mr. H. Rivett-Carnac for exhibition to the Society, and read the following extract from the letter accompanying them: "I send for the inspection of the Society copper coins obtained from the Panjáb, which appear to be of rare, if not of unknown, types. Many of them approach those figured in the *Ariana Antiqua* and in Prinsep's *Indian Antiquities* as Indo-Sassanian coins. Others again bear a distinct impression of the Bull with inscription. The variety is considerable, but as I have not had time to examine them carefully, I think it well to send them without delay to the Society to whom the types may possibly be well known. It may be noted that some of the coins seem to have been stamped twice over,—the bull above some former design."

DR. RUDOLF HOERNLE stated that he had examined them carefully and found that they all appeared to be Kashmir coins of various dates and types. They consisted of the following kinds:

No. 1. Fifteen specimens. Plate I, figs. 1—4. *Obv.* Head or bust of king, facing right with fillet behind, after the fashion of Sassanian coins (see *Ariana Antiqua*, Plates XVI and XVII). In front of face, along the margin, legend in later Gupta characters, श्री मिहिरकुल *Srī Mihirakula*, or (on two specimens) श्री मिहिरगुल *Srī Mihiragula*. *Rev.* The circular area divided by a straight line in two unequal parts. In the upper and larger portion, standing on the line, a bull walking, to the right, towards what looks like a low trident set up on the line, in front of him. Above his hind-quarters a crescent. In the lower, smaller part of the area, a legend in later Gupta characters: जयतु इष *jayatu vrisha*,

'may the bull be victorious.' Circular dotted margins on both sides. Most of these coins are in fair preservation; several showing distinctly the whole legend.

No. 2. Two specimens. Plate I, fig. 5. A variety of No. 2, the crescent on *Rev.* replaced by a *y*-shaped symbol, and the trident staff is wanting. Moreover on one of them the bull is represented in the attitude of running or jumping. The dots on both coins are much smaller; the name is spelt *Mihiragula*, and the letter म *m* is formed peculiarly, being hardly distinguishable from a प *p*.

No. 3. One specimen. Another variety of No. 2. On the *obv.* the legend is placed below the head; while the space in front of the face is occupied by a symbol resembling monogram No. 163 of the *Ariana Antiqua*, as on figs. 9 and 10 of Plate XVI of that work.

No. 4. One specimen. A third variety of No. 2. On *rev.* the dividing line is wanting, the area being occupied by the bull, and above him, along the dotted margin, is placed the legend *jayatu vrisha*. The characters on this specimen are of an older type, being angular.

No. 5. Six specimens. Plate I, figs. 6, 7. *Obv.*, King's head or bust, facing right with fillet behind, as on No. 1. In front of face, a symbol, resembling an angular shaped 9, which, if it be a graphic sign, may be read as *bra* or *pra*. *Rev.*, Circular area, divided into two halves by a straight line; in the upper half a wheel within a circle of dots; in the lower half, the two letters नोरा *tora*, in large bold Gupta characters of a late type. Circular dotted margins on both sides.

No. 6. Fourteen specimens. Plate I, figs. 8, 9. *Obv.*, Head or bust of king, with fillet behind; in front of face, monogram No. 163 of the *Ariana Antiqua*, as on figs. 9 and 10 of Plate XVI, and on fig. 20 of Plate XVII. *Rev.*, figure of running bull, with turned-up tail, facing to the left. Dotted margins on both sides, but no legends. Most of these are very poor specimens.

No. 7. Eleven specimens. Plate I, figs. 10, 11. Variety of No. 6; the only difference being that the bull faces to the right.

No. 8. One specimen. Plate I, fig. 12. Another variety of No. 6; the only difference being, that instead of the monogram there is an inscription, consisting of the letter ह *ha*, and after it perhaps रा *ra*.

No. 9. One specimen. Plate I, fig. 13. *Obv.*, Head or bust of king, facing left, with crescent surmounting the forehead, and a trident and fillet in front of it; somewhat resembling fig. 20 on Plate XVI in the *Ariana Antiqua*. *Rev.*, Standing bull, facing left, towards what looks like a crude fire altar; above distinctly the letters रुद्रा *rudra*.

No. 10. One specimen. Plate I, fig. 14. *Obv.*, Crude standing figure of king, facing to the front, with left arm akimbo, its right resting on a

spear or staff; somewhat resembling the figure on the later Indo-Scythian coins. *Rev.*, Wheel as in No. 5, with some large marks looking like letters (perhaps *बोधि bodhi*).

Besides there are seven coins in the collection, which are too badly preserved to allow of being identified, but they probably belong to Nos. 6 and 7.

One of the most curious circumstances about these coins is, that as already noticed by Mr. Rivett-Carnac, some of them are double struck. Nearly all these double struck specimens occur in Nos. 1 and 5. In the former there are 6 out of 15; in the latter 4 out of 6. One only occurs in each of Nos. 6, 7 and 8. In the case of those occurring on No. 1, the emblems of No. 5 appear to be superimposed on those of No. 1, in the following way: in three specimens (Pl. I, fig. 3) the *rev.* of No. 5 (with *tora* and wheel) is placed over the *obv.* of No. 1 (head), while its *obv.* (head) is over the *rev.* of No. 1 (bull). In the other three specimens (Pl. I, fig. 4) the *obv.* of No. 1 (head) is more or less preserved to do duty for the *obv.* of No. 5 (head), while on the *rev.* the emblems of No. 5 (*tora* and wheel) are superimposed on the emblem of No. 1 (bull). On one specimen the emblems of No. 1 seem to be superimposed on those of No. 5, but this, being an exceptional case, may be an illusion. In the case of the double struck specimens occurring on No. 5, the emblems appear to be the same (Pl. I, fig. 7); it seems as if two consecutive attempts were made to strike the same emblems (*obv.* head, *rev.* *tora* and wheel) on a piece of copper, the first having been unsuccessful. In the double struck specimen of No. 6 (Pl. I, fig. 9), the *obv.* of No. 6 (head) is placed over the *rev.* of No. 1 (bull and inscription) of which only a small portion of the inscription (*viz.* *य ya*) is still visible; while the *rev.* of No. 6 (running bull) is placed on the *obv.* of No. 1. In the double struck specimen of No. 7 (Pl. I, fig. 11), the *obv.* of No. 7 (head and monogram) is placed over the *rev.* of No. 5 (*tora* and wheel), while the *rev.* of No. 7 (running bull) is over the *obv.* of No. 5 (head). In the double struck specimen of No. 8, again, the *obv.* of No. 8 (head with *hara*) is placed over the *rev.* of No. 1 (bull) which has entirely disappeared; while the *rev.* of No. 8 (running bull) is placed over the *obv.* of No. 1 (head with inscription) of which only a small portion of the inscription (*viz.* *श्रीम श्री M*) is still distinctly visible. From these facts the historical sequence of the coins would appear to be that No. 1 comes first, then Nos. 5, 6 and 7 as contemporaries. This agrees with the notices contained in the *Rājataranginī*. According to that work there was a Kashmirian King, called Mihirakula (perhaps in the 7th century A. D.), and after a long interval (perhaps of 200 years) a king Pravarasena I. The latter had two sons, Hiranya and Toramāna, of whom the latter rebelled against his brother and

coined money. It is recorded of him that "he forbade the use of the coin struck by king Bála and largely circulated the *dínáras* coined by himself" (see J. C. Dutt's Translation, p. 38). Now the coins No. 1 are clearly those of Mihirakula. About him it is said that he was defeated by Báláditya. The coins No. 5, with *tora* on them, may be ascribed to Toramána, and the notice that "he forbade the coins of king Bála" may be a reminiscence of the fact that he re-struck the coins of Mihirakula, as shown by the present collection. In favour of the ascription of the *tora* coins to Toramána, it may be mentioned, that in the Society's collection there is a copper-coin closely resembling the present ones, which prefixes श्री *śrī* to *tora* (श्रीतोर). If this is correct, the letters प्र *pra* on the *obv.* may perhaps be read as an abbreviation of Pravarasena, the name of his father. Further the coin No. 8, with *Ha* or *Hara* on it, may be ascribed to Toramána's elder brother Hiranya; and since No. 8 is only a variety of the anonymous coins Nos. 6 and 7, it is probable that all the coins, Nos. 6—8, are those of Hiranya. It would seem (so far as one may allowed to judge from the evidence of the present collection,) that till the time of the two brothers Hiranya and Toramána, the money of Mihirakula still formed the common currency of the country; and that Hiranya sparingly, but Toramána more extensively, began to supersede it by re-striking the pieces with their own emblems.

MR. FLEET remarked that the coins were Kashmíri coins, and that, according to all historians, Toramána succeeded Mihirakula. The latter came from the North West and established his kingdom in the Panjáb. He attempted to destroy Buddhism, but was defeated by Báláditya, and after several vicissitudes gained possession of Kashmir. The former came long afterwards and was imprisoned for issuing coins without authority. He died immediately after being delivered from prison.

The following paper was read:—

On certain Symbols or devices on the Gold Coins of the Guptas.—By W. THEOBALD, M. N. S. L.

(Abstract.)

The author refers to Mr. V. A. Smith's paper on the Gupta coinage, published in the Society's Journal, Part I of 1884, and offers what he believes to be not only a new, but perhaps a more correct, interpretation of three of the symbols which occur on the Gupta coins. These are, the "fillet" (or "noose"), the "cornucopiæ" and the "footstool." Mr. Theobald contrasts these symbols with similar ones which occur on Bactrian, Indo-Scythian and other coins, and arrives at the conclusion, that on the Indian coins they clearly represent peculiarly Indian ideas, wholly different from those which they admittedly repre-

sent on the Grecian or semi-Grecian ones. Thus the "fillet" or "noose" he considers to be "of ambiguous import, and that it represents indifferently the 'noose' of Siva, when borne by a goddess, whom we have reasons for regarding as his Sakti; or when it is borne by a goddess presumably identified with Lakshmi, it is then a feminine symbol analogous to the 'Sistrum' of Isis; and that it is by collateral indications only that it can be decided in which sense, in each case, this symbol is to be construed." Regarding the "cornucopiæ," the author thinks that it differs considerably from the types of that symbol on the Indo-Scythian coins, the main difference being a number of equidistant dots set on a convex line, by which the cornucopiæ is closed above; and that this difference is too constant and circumstantial to be the result either of accident or inferior execution. Hence, he considers it to represent the well-known object of Hindú symbolical worship, the Snake or polycephalic Nág, the heads of which are indicated by the dots. The so-called "footstool" Mr. Theobald considers to be but another representation of the Nág, a fold of which is represented as encircling the solid earth. The only point which puzzles him is how this obvious interpretation of the three symbols has hitherto escaped the notice of the far abler antiquaries than himself, who have studied these coins.

This paper will be published in full in *Journal*, Part I.

The following note from Mr. F. Chambers, in reply to the criticism by Mr. H. F. Blanford on his paper read at the November meeting, was read.

The greater part of my paper is devoted to proving that barometric depressions travel from the western frontier of India across Sind to Rajputana, and I purposely avoided dealing with their motion from Rajputana eastward, because that is the point about which there is no dispute. If it be admitted that I have proved my case, the contention that these disturbances originated in western Rajputana must be abandoned. Both propositions cannot be correct, for a disturbance cannot originate in Rajputana and also travel thither from the western frontier of India. Thus far with respect to the facts brought forward by me! I now turn to the evidence adduced in Mr. Blanford's paper (page 7, Part II, No. I of the *Journal* for 1884) in support of his conclusion "that in most cases, if not in all, these disturbances originate in India." With regard to those which are supposed to have originated in western Rajputana, I find the date is given of but one case, that of the 25th January 1878. This instance is now claimed as an exception to the general rule of eastward motion, but I find that a minimum of pressure occurred at Kurrachee on the 25th, at Deesa on the 26th, and at Indore on the 27th, clearly indicating the usual eastward movement from some

region to the westward of Kurrachee. Other instances are mentioned of disturbances having originated in western Rajputana in January, February and March 1881, but the dates are not given and I am unable to identify them. With regard to those disturbances which are supposed to have originated in other parts of India, I must point out that the case given as having occurred on the 10th to 13th January 1878, which is said to have just appeared on the western half of the Deccan plateau, really appeared first at Bhuj and Raykot on the 9th January, and afterwards moved eastwards in accordance with the usual rule. Similarly, the case of the 10th February 1879, which is supposed to have originated in the heart of India, was really preceded on the 9th February by a minimum of pressure in western India, and followed on the 11th and 12th by a minimum in Bengal. It must therefore have originated farther to the westward than the position assigned to it.

Again, in the case of the 15th to 18th February 1880, which is said to have been just established in the Central Provinces, there is decided evidence, in the chart for the 14th February 1880, published in the Report on the Meteorology of India for that year, to prove that the disturbance really entered India from the Bombay Coast. I maintain, therefore, that Mr. Blanford has not brought forward a single undoubted instance of the origin of a winter cyclonic disturbance in India. In every case there is evidence to show that the disturbance entered India from the westward. What then becomes of the theory devised to explain their origin in India?

The further question now arises, did these disturbances originate on the western borders of India, or did they come from regions farther to the west? As I said in my note, this is a matter which cannot be finally decided without observations from those regions, but having traced the barometric depressions from the western confines of India into the interior, the latter alternative seems to me by far the more probable of the two.

I cannot on this occasion follow Mr. Blanford into the long discussion, in which he endeavours to show that one of the Indian storm tracks published at Washington is unworthy of confidence. I grant that every well ascertained case of a breach of continuity in the path of a storm affords an argument against the application of the principle of continuity to connect storm centres which are far apart; but, on the other hand, every well-observed case of a long and continuous storm path—and there are hundreds, perhaps thousands, of such cases on record—affords an argument in favour of the application of the principle. The contention amounts then to this, that even if the two cases of supposed discontinuity, to which Mr. Blanford refers, be accepted as such, the fact still

remains that there is some probability in favour of the track laid down in the American Chart for February 1878, and certainty is not claimed for it either by myself or the Chartographer. There is this to be said, however, in favour of the American charts of Indian storm tracks, that, with all their want of accuracy of detail, they are the publications which, as far as I am aware, first brought to light the fact of the eastward motion of the winter storms of Northern India, a fact which later investigation has fully confirmed. I cannot admit, however, that the storm of the 11th to 13th November 1881 affords clear evidence of a breach of the continuity of a storm track, and the assertion that the storm of the 11th to 13th July 1881 was independent of that of the 2nd to 6th July requires proof. All the facts of the November case seem to me to accord far better with the simpler supposition, that the opposing friction of the land surface merely produced a temporary diminution of the intensity of the storm; and the July instance may possibly be one of the same kind. It is clear that the latter storm did not originate in Gujarat, but travelled from the Malwa plateau into Cutch and Lower Sind, increasing in intensity as it passed into the plain below, and onward towards the Arabian Sea. In both the above cases Mr. Blanford appears to me to have mistaken the rapid development of a feeble cyclone, previously in existence, for the birth of a new and independent vortex. The distinction may appear to be of little consequence, but it has a very important bearing on the administration of the Bombay storm warning service. The fact, that this question is one on which widely different opinions are held, is a proof that further discussion is needed, but to deal with the matter satisfactorily would require the whole of a separate paper, and I must now defer the further consideration of it.

With regard to Mr. Eliot's remarks, I would merely point out that the side issue mentioned in my note had reference to the original question, raised in my letter to "Nature," as to whether the winter rains were to be ascribed to cyclonic disturbances or to the upper anti-monsoon current. It did not refer to the question as to where the winter storms originate. The latter question is obviously a side issue of the former, but I quite agree with Mr. Eliot in regarding it as a legitimate subject for further inquiry, although it may be of secondary importance to the investigation of the conditions, which give rise to the continued existence and eastward motion of the winter cyclones. One practical conclusion from the whole discussion seems to me to be that more information is required from regions to the westward of India. Waiting for this information, however, can hardly be considered the best way of obtaining it.

LIBRARY,

The following additions have been made to the Library since the meeting held in December last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Baltimore. American Chemical Journal,—Vol. VI, No. 4, November, 1884.

Birmingham. Birmingham Philosophical Society,—Proceedings, Vol. IV, Part 1.

Bombay. Indian Antiquary,—Vol. XIII, Parts 161—163, October and November, 1884.

Bordeaux. Société de Géographie Commerciale,—Bulletin, Vol. VII, (series II), No. 22.

Buenos Aires. Academia Nacional de Ciencias,—Boletin, Vol. VI, Parts 2 and 3.

Calcutta. Asiatic Researches (Popular Edition),—Vol. I, No. 4.

———. Geological Survey of India,—Memoirs, Palæontologia Indica, Vol. I (Series XIII), Part 4.

———. ———. Records, Vols. XVII, Part 4; XXI, Parts 1 and 2.

———. Original Meteorological Observations,—May, 1884.

Cambridge. American Philological Association,—Transactions, Vol. XIV.

The Hague. Koninklijk Instituut Taal-Land en Volkenkunde van Nederlandsch—Judië,—Bijdragen, Vol. VIII, No. 3.

Ithaca. The Library of Cornell University,—Vol. I, No. 10.

Lahore. Anjuman-i-Punjab,—Journal (English Section), Vol. IV, Nos. 48—53.

London. Academy,—Nos. 654—658.

———. Athenæum,—Nos. 2977—2981.

———. Nature,—Vol. XXXI, Nos. 785—789.

———. Royal Asiatic Society,—Journal, Vol. XVI (new Series), Part 4, October, 1884.

———. Royal Astronomical Society,—Monthly Notices, Vol. XLIV, No. 9.

———. Royal Geographical Society,—Proceedings, Vol. VI, (new Series), No. 11, November, 1884.

- London. Royal Microscopical Society,—Journal, Vol. IV (Series II), Part 5, October, 1884.
- . Royal Society—Proceedings, Vols. XXXVI, No. 231; XXXVII, No. 232.
- . Society of Telegraph Engineers,—Journal, Vol. XIII, No. 53.
- . ————. List of Members, June 30th, 1884.
- . Statistical Society,—Journal, Vol. XLVII, Part 3.
- . Zoological Society,—Proceedings, Part 3, 1884.
- Munich. Repertorium der Physik,—Vol. XX, No. 11.
- Paris. Société Académique Indo-Chinoise—Bulletin, Vol. I (Series II).
- . Société d'Anthropologie,—Bulletin, Vol. VII (Series III), Fasc. 3.
- . Société de Géographie,—Compte Rendu, Nos. 16 and 17, 1884.
- Rome. Società Degli Spettroscopisti Italiani,—Memorie, Vol. XIII, Nos. 9 and 10, September and October, 1884.
- St. Petersburg. Russian Geographical Society,—Proceedings,—Vol. XX, Nos. 4 and 5.
- Zagreb. Arkeologickoga Druztva,—Viestnik,—Vol. VI, No. 4.

BOOKS AND PAMPHLETS,

presented by the Authors, and Translators.

- GROWSE, F. S. Bulandshahr: or Sketches of an Indian District; Social, Historical and Architectural with Plates. 4to. Benares, 1884.
- OPPERT, GUSTAV. Ne Sutor ultra crepidam. In self-defence. 8vo. Madras, 1884.
- ROY, PROTAP CHUNDR. The Mahābhārata, translated into English Prose. Part XII. 8vo. Calcutta, 1884.
- VAUGHAN, J. D. The Manners and Customs of the Chinese of the Straits Settlement. 8vo. Singapore, 1879.

MISCELLANEOUS PRESENTATIONS.

- Indian Forester, Vol. X, Nos. 9-12, September to December, 1884. 8vo. Roorkee, 1884.

BENGAL GOVERNMENT.

- Administration Report of the Central Provinces for the year 1883-84. Fcp. Nagpur, 1884.
- Report on the Lunatic Asylums in the Central Provinces for the year 1883. Fcp. Nagpur, 1884.
- Report on the Vaccine Operations in the Central Provinces for the year 1883-84. Fcp. Nagpur, 1884.

Returns of Railway borne Traffic in the Central Provinces during the quarters ending 30th June and 30th September, 1884. Fcp. Nagpur, 1884.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

The Lepidoptera of Ceylon, Parts 6—9, by F. Moore. 4to. London, 1882-84.

COLONIAL SECRETARY, COLOMBO.

The Legislative Acts of the Governor General of India in Council from 1834-1877. 8vo. Calcutta, 1860-78.

THE HON. J. GIBBS.

A Dictionary of Urdu, Classical Hindi, and English, by John T. Platts. 8vo. London, 1884.

HOME DEPARTMENT.

International Meteorological Observations, September, 1883. 4to. Washington, 1884.

Monthly Weather Review for September, 1884. 4to. Washington, 1884.

METEOR. REPORTER TO THE GOVERNMENT OF INDIA.

Gazetteers of the following Districts:—Delhi, Rohtak, Jalandhar, Amritsar, Gujrat, Jhelam, Sháhpur, Mooltan, Jhang, Montgomery, Muzaffargarh, Dera Ghazi Khan, Pesháwar, and Bannu. 8vo. Lahore, 1883-84.

PUNJAB GOVERNMENT.

Tide-Tables for the Indian Ports for the year 1885 and January, 1886. 12mo. Calcutta.

Tide-Tables for the River Hooghly for 1885. 8vo. Calcutta, 1884.

SURVEYOR, IN CHARGE TIDAL AND LEVELLING OPERATIONS, SURVEY OF INDIA, POONA.

PERIODICALS PURCHASED.

Allahabad. Punjab Notes and Queries,—Vol. II, No. 15, and Index to Vol. I.

Berlin. Deutsche Litteraturzeitung,—Vol. V, Nos. 40—44.

———. Journal für die reine und angewandte Mathematik,—Vol. XCVII, No. 3.

Calcutta. Asiatic Researches (Popular Edition),—Vol. I, No. 4.

———. Calcutta Review,—Vol. LXXX, No. 159, January, 1885.

———. Indian Medical Gazette,—Vol. XIX, No. 12, December, 1884.

Cassel. Botanisches Centralblatt,—Vol. XX, Nos. 1—4.

Edinburgh. Edinburgh Review,—Vol. CLX, No. 328, October, 1884.

Florence. Società Italiana di Antropologia e Etnologia,—Archivio per l'Antropologia e la Etnologia, Vol. XIV, No. 2.

- Geneva. Archives des Sciences Physiques et Naturelles.—Vol. XII, No. 11.
- Göttingen. Gelehrte Anzeigen,—Nos. 21—25, 1884.
- . Nachrichten,—Nos. 10 and 11, 1884.
- Leipzig. Annalen der Physik und Chemie,—Vol. XXIII, Nos. 3 and 4.
- . Beiblätter,—Vol. VIII, Nos. 10 and 11.
- . Hesperos,—Vol. IV, Nos. 82—84.
- . Literarisches Centralblatt,—Nos. 41—45, 1884.
- London. Annals and Magazine of Natural History,—Vol. XIV, (series V), No. 83, November, 1884.
- . Chemical News,—Vol. L, Nos. 1303—1307.
- . Entomologist,—Vol. XVII, No. 25, November, 1884.
- . Entomologist's Monthly Magazine,—Vol. XXI, No. 246, November, 1884.
- . Ibis,—Vol. II, (series V), No. 8, October, 1884.
- . Journal of Botany,—Vol. XXII, No. 263, November, 1884.
- . Journal of Science,—Vol. VI, (series III), No. 131, November, 1884.
- . London, Edinburgh, and Dublin Philosophical Magazine,—Vol. XVIII, No. 114, November, 1884.
- . Nineteenth Century,—Vol. XVI, No. 93, November, 1884.
- . Publishers' Circular,—Vol. XLVII, Nos. 1132 and 1133.
- . Quarterly Journal of Microscopical Science,—Vol. XXIV, No. 96, October, 1884.
- . Quarterly Review,—Vol. CLVIII, No. 316, October, 1884.
- . Society of Arts,—Journal, Vols. XXXII, No. 1669; XXXIII, Nos. 1670—1673.
- . Westminster Review,—Vol. CXXII, No. 244, October, 1884.
- New Haven. American Journal of Science,—Vol. XXVIII, (series III), No. 166, October, 1884.
- Paris. Revue Critique,—Vol. XVIII, Nos. 40—45.
- . Revue des Deux Mondes,—Vols. LXV, No. 4; LXVI, No. 1.
- Vienna. Orientalische Museum,—Oesterreichische Monatschrift für den Orient, Vol. X, No. 11.

BOOKS PURCHASED.

- TEMPLE, CAPT. R. C. Legends of the Punjab. No. XVI. 8vo. Bombay, 1884.
- TRYON, G. W. Manual of Conchology, Part XXIV. 8vo. Philadelphia.

PROCEEDINGS

OF THE INDIA.

ASIATIC SOCIETY OF BENGAL,

FOR FEBRUARY, 1885.

The Annual Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th February, 1885, at 9 P. M.

The Hon'ble J. GIBBS, C. S. I., Vice-President in the Chair.

According to the Bye-Laws of the Society, the President ordered the voting papers to be distributed for the election of Officers and Members of Council for 1885; and appointed Messrs. J. C. Douglas and R. Logan, Scrutineers.

The PRESIDENT then called upon the Secretary to read the Annual Report.

ANNUAL REPORT FOR 1884.

The Council of the Asiatic Society of Bengal have the honor to submit the following Report on the state and progress of the Society's affairs for the past year.

Member List.

In the year under review, 29 gentlemen were elected ordinary members of the Society, 17 Members withdrew, 4 died and 5 were removed from the List in accordance with Rule 40; the result showing a net gain of 3 Members to the Society. The total number of Members, therefore, at the close of 1884 was 326 against 323 at the end of the preceding year. Of these, 102 are Resident, 157 Non-Resident, 12 Foreign, 15 Life and 40 Non-Subscribing Members, as will be seen from the following Table, which also shows the fluctuations in the number of Ordinary Members for the past 6 years.

YEAR.	PAYING.				NON-PAYING.			GRAND TOTAL.
	Resident.	Non-resi- dent.	Foreign.	Total.	Life.	Absent.	Total.	
1879	111	154	16	281	12	36	48	329
1880	112	185	15	312	14	30	44	356
1881	110	168	17	295	14	41	55	350
1882	101	155	18	274	15	48	63	337
1883	100	142	18	260	15	48	63	323
1884	102	157	12	271	15	40	55	326

During the year, one member, the Nawab Nazim of Bengal, compounded for his future subscriptions.

The Society lost one of its oldest members, Sir Edward Clive Bayley. He was born on October 17th, 1821, and, after a distinguished career at Haileybury, arrived at Calcutta in 1842. The earlier years of his official life were spent in district work, in the North-Western Provinces. In 1849, he was appointed Settlement Officer of Guzerat, then recently acquired by the East India Company on the downfall of the kingdom of the Sikhs. Here he distinguished himself greatly, and was soon after brought to the Foreign Department, where, under the guiding spirit of Sir Henry Elliot, he imbibed a taste for oriental researches which grew with his growth and ceased only on his demise. Sir Henry was then engaged in his great work on the Muhammadan historians, and Mr. Bayley translated for him from Persian works many voluminous extracts, some of which were published by Sir Henry Elliot, and all spoken of in high terms of praise by that renowned Orientalist. Other extracts have since been published in the late Professor Dawson's continuation of Sir Henry's work. After a service of three years, in the Punjab in 1855, Mr. Bayley availed himself of the furlough to which he was then entitled, and during his leave went through the usual course of studies and got himself admitted to the Bar. Soon after his return to India, he was appointed Secretary to the Foreign Department, and subsequently to the Home Department of the India Government, which office he held for several years. During the last four years of his sojourn in India he was a member of the Supreme Council, and held the portfolio of the Home Department. For four years he held the office of Vice-Chancellor of the Calcutta University. His connection with the Asiatic Society dated from 1851, and he was President of the Society for five, and Vice-President for three years. His leisure hours were devoted to antiquarian researches, but his onerous official duties did not permit

him to devote so much time to them as he wished. His sojourn in the Punjab immediately after its acquisition by the British Government gave him excellent opportunities, which he utilized to the utmost, for collecting old coins, and as an accomplished numismatist he made for himself a name which is honorably known in Europe. The study of numismatics necessarily attracted his attention to Indian epigraphy, and he devoted much attention to inscriptions. Since his retirement from India he wrote two valuable essays on the genesis of the Indian Alphabet and of the Indian numerals. While engaged in translating extracts from the works of Muhammadan writers, and subsequently during his sojourn at Agra and Delhi, he paid much attention to mediæval Indian history, and he was well known to be one of the most enthusiastic and able expounders of the history of the Muhammadans in India. He contributed to the Society nine papers on history, numismatics, ancient inscriptions, and sculptures, and published several others in Europe. These learned papers were received with respect by, and have ably assisted, the archæologists of this country, and his name is intimately associated with the progress of this Society.

The other 3 ordinary members who died during the year were Dr. H. W. McCann, the Society's General Secretary, whose loss has been feelingly acknowledged, and an account of whose life and labours has been published in the Proceedings for July; Mr. J. B. Chalmers and Mr. R. Pawsey.

An Associate Member was elected during the year, Mr. F. Moore, F. Z. S., in recognition of his contributions to Indian Entomology.

At the Centenary Meeting, held on the 18th January 1884, to celebrate the Hundredth Anniversary of the first meeting of the Asiatic Society, the following six gentlemen, on the proposal of the Council, were unanimously elected Special Centenary Honorary Members.

1. James Prescott Joule, Esq., LL. D., F. R. S., Manchester.
2. Dr. Ernst Haeckel, Professor in the University of Jena.
3. Charles Meldrum, Esq., M. A., F. R. S., Mauritius.
4. A. H. Sayce, Esq., Professor of Comp. Philology, Oxford.
5. M. Emile Sénart, Member of the Institute of France, Paris.
6. Monier Williams, Esq., Boden Prof. of Sanskrit, Oxford.

Indian Museum.

The following presentations made to the Society have been transferred to the Indian Museum, under the provisions of Act XXII of 1876.

2 Brass objects, one of which looks like a seal, presented by Col. M. G. Clerk, and found by him in an excavation in Accra near Bannu in the Punjab.

A vacancy in the office of Trustee having occurred by the death of Dr. H. W. McCann, Mr. F. E. Pargiter was elected a Trustee on behalf of the Society.

Finance.

The Appendix contains the usual classified Statement shewing the accounts of the Asiatic Society.

Under Statement No. 1 will be found the account of receipts and disbursements of the Asiatic Society during the year 1884.

Statement Nos. 2 and 3 show how the money administered through the Society in the Oriental Publication and Sanskrit Manuscripts Funds has been spent during the past year. A fixed allowance of Rs. 750 per month is given by the Government of India to the Oriental Publication Fund, and a yearly sum of Rs. 3,200 is paid by the same authority to the credit of the Sanskrit Manuscripts Fund.

Statement No. 4 gives an account of monies due by and to the Members of this Society.

In Statement No. 5 an account is given of the sums invested in Government securities and held in deposit by the Bank of Bengal. They consist of Rs. 21,800 in 4 per cent. Government paper and Rs. 1,37,000 in $4\frac{1}{2}$ per cent. Government paper, making together Rs. 1,58,800.

Statement No. 6 shows the sum invested, known as the Piddington Trust Fund, the interest of which is applied to the payment of a pension to an old servant of the Society.

The Cash receipts and expenditure of the Society as well as those of the different funds are summed up in Statement No. 7.

Statement No. 8 exhibits the balance sheet of the different statements.

The budget for the past year was estimated by the Council of the Society thus: Receipts Rs. 15,725. Expenditure Rs. 15,429. The actuals of the year were found to be: Receipts Rs. 15,154. Expenditure Rs. 14,805.

In the receipts under the head "Subscriptions" a decrease of Rs. 700 has taken place, and this is due to the high figure at which the amount was budgetted for last year. According to the number of Members, resident, non-resident and foreign, on the list of the Society at the close of the past year, an amount of Rs. 7,600 only could have been raised; but as there were large arrears due from Members, it was expected that some portion of them would be realized, and would thus raise the total subscriptions to Rs. 8,000. Although every available means has been employed to call in the outstandings, yet the efforts have been far from successful. A dozen

members owe sums of money aggregating close upon 900 Rs. to the Society, and have failed to discharge their debts, although repeatedly called upon to do so.

Several items on the expenditure side show a marked saving, whilst in some cases the budget estimate has been exceeded. On the whole the amount expended is less than that budgetted for by Rs. 624.

The budget estimate for 1885 is as follows—

RECEIPTS.

Subscriptions	...	...	...	Rs.	7,500
Sale of Periodicals	...	...	...	„	1,200
Interest on Investments	...	...	...	„	6,200
Miscellaneous	...	...	...	„	200
					<hr/>
					Rs. 15,100
					<hr/>

EXPENDITURE.

Salaries	...	...	...	...	Rs.	3,820
Commission	...	...	...	...	„	320
Pension	...	...	...	...	„	8
Stationery	...	...	...	...	„	220
Lighting	...	...	...	...	„	100
Building	...	...	...	...	„	50
Taxes	...	...	...	...	„	720
Postage	...	...	...	...	„	700
Freight	...	...	...	...	„	20
Meetings	...	...	...	...	„	80
Contingencies	...	...	...	...	„	200
Books	...	...	...	...	„	1,500
Local Periodicals	...	...	...	...	„	90
Binding	...	...	...	...	„	600
Coins	...	...	...	...	„	100
Journal, Part I	...	...	...	...	„	2,100
„ Part II	...	...	...	...	„	2,000
Proceedings	...	...	...	...	„	1,000
Printing of Circulars	...	...	...	...	„	150
Assistant Secretary's bonus for Library Catalogue	...	...	...	...	„	600
						<hr/>
						Rs. 14,378
						<hr/>

In addition to the ordinary expenditure a sum of Rs. 2,300 will be required to pay for the Centenary review. During the past year, nearly Rs. 1,400 were paid for the Catalogue, which has already been issued to the members, and a further sum of about Rs. 950 was given for the printing of a portion of the Centenary review.

London Agency.

Messrs. Trübner and Co.'s statement of account with the Society for the year 1883 showed a balance in our favour of £16-4-2½.

Their sales of the Society's publications during the same period amounted to £64-1-6 and of the *Bibliotheca Indica* to £23-15-7½.

During the year 1884, 18 Invoices of Books purchased and of publications of various Societies sent in exchange were received from Messrs. Trübner and Co. The value of the books purchased amounted to £104-8-2.

The number of copies of parts of the Journal, Proceedings, and *Bibliotheca Indica* sent to Messrs. Trübner and Co. for sale was 365, 270, and 624 respectively.

Library.

The additions to the Library numbered 2,042 volumes or parts of volumes. Of these 798 were purchased, and 1,244 presented or received in exchange.

The Council have at length much pleasure in announcing the publication of the Library Catalogue which was issued in the second quarter of the year. Great credit is due to the late Assistant Secretary Mr. Bion for his exertions in its compilation, and the Council have, in recognition of his services, awarded him a bonus of Rs. 600. The Council are also under great obligations to Mr. H. B. Medlicott and Dr. Hoernle for their careful supervision of the work both during its compilation and during its progress through the press.

Publications.

Four Nos. of the Journal, Part I, and two of Part II, were published during the year, containing 444 and 186 pages of letter-press, and 7 and 10 plates respectively. A third No. of Part II, with 4 plates, is nearly ready.

Eleven Nos. of the Proceedings containing 215 pages of letter-press and 2 plates were also published.

Building.

The total amount spent on the building in 1884 was Rs. 902-8-0, and provided for repairs to the outhouses and to the exterior of the Society's premises.

Coin Cabinet.

The additions to the Cabinet have been very few in 1884, the total number of coins added being 25, *viz.* 5 gold and 20 silver. All were purchased at a total cost of Rs. 140, no coin having been presented during the past year.

Of the 5 gold coins, found at Chindwarrah, Nerbudda district, Central Provinces, one was of the reign of Alamgir II, Aziz-ud-din, two others of the reign of Aurangzib, dates 1106 and 1110, the fourth and fifth of the reign of Muhammad Shah of the year 1144 and 11(43). All these are apparently new or unpublished types, except the last which is described in Marsden's *Numismata Orientalia*, p. 667 No. DCCCCXXI.

Of the silver coins, eight were of Menander found in a Jahrian village, in the Amritsar division; five were of the common so-called Indo-Sassanian kind, found at Fatehgurh and seven were of Rafi-ud-derjat and Farakhsir, found at Etawah.

Secretary's Office.

In June 1884, the Society sustained a great loss by the death of Dr. W. H. McCaun, their General Secretary. Mr. F. E. Pargiter was appointed in his place and has continued to hold it since.

Mr. Wood-Mason returned from Europe in May, and resumed charge of the office of Natural History Secretary from Mr. L. de Niceville, who had been appointed to officiate in October 1883.

Dr. Hoernle, the Society's Philological Secretary, was absent on three months' leave from April to July, and Mr. C. H. Tawney officiated during the interval.

Mr. F. W. Peterson has continued to act as Treasurer throughout the year.

Mr. W. A. Bion, the Assistant Secretary was absent on seven months' leave from April to October, during which period Mr. J. F. Duplessis was appointed to officiate for him. Mr. Bion returned in November, but in December resigned the service for better prospects elsewhere, when Mr. Duplessis was appointed to fill the vacancy permanently.

Mr. J. H. Elliott has held the post of Assistant Librarian throughout the year, Babu Nritya Gopal Basu that of Cashier and Babu Amrita Lal Das that of Copyist.

Bibliotheca Indica.

Twenty-six fasciculi were published during the year: nine in the Arabic-Persian Series and seventeen in the Sanskrit Series. They belong to thirteen different works, of which three are in the former

and ten in the latter Series, each Series containing one *new* publication, *viz.*, the translation of the Muntakhab-ut-Tāwārīkh and the text of the Tattva Chintāmaṇi respectively. One of the Sanskrit Series, *viz.*, Kāmandaki's Nītisāra has been completed; another the Kathā Sarit Sāgara has also been practically completed, there only remaining the index to be published, which will appear shortly.

A. Arabic-Persian Series.

1. Of the IṣāBAH or Biographical Dictionary of persons who knew Muhammad by Ibn Hajar, one fasciculus has been published by Maulvi Abdul Hai, being the sixth of the third volume. It carries the list of "male witnesses" down to number 1494, at the beginning of *Kaf* (کف).

2. Of the AKBARNÁMAH, edited by Maulvi Abdur Rahím, of the Calcutta Madrasah, six fasciculi have been published, continuing the history of Akbar down to the year 994.

3. Of the annotated English translation of the second volume of MUNTAKHAB-UT-TÁWÁRÍKH, which had been announced in the Annual Report for 1882 (see Proc. Feb. 1883) the first two fasciculi were published by the Rev. W. H. Lowe, M. A., of Cambridge, in the course of the past year. The text, in three volumes, has already been published by the Society; and an English translation of the first volume, to be published *pari passu* with the second, is in course of preparation.

B. Sanskrit Series.

4. The joint editors, Pandits Yogeśwara Smṛitiratna and Kámá-khyánátha Tarkaratna, have advanced their edition of Hemádri's CHATURVARGA CHINTÁMAṆI by three fasciculi which belong to the first part of the Society's third volume, being the fifth part (or Pañśesha Khaṇḍa) of the work itself.

5. Pandit Satyavrata Sāmaśrami has continued the second volume of his annotated edition of the well-known NIRUKTA glossary by the issue of three fasciculi.

6. Professor Dr. R. Garbe of Königsberg, likewise, has continued the second volume of his edition of the important ĀPASTAMBA ŚRAUTA SŪTRA by the issue of two more fasciculi. One more fasciculus, which is ready, will complete this volume.

7. Mr. C. H. Tawney, M. A., Principal of the Presidency College has published three fasciculi of his annotated English translation of the KATHÁ SARIT SÁGARA. These complete the second volume. One more fasciculus remains which will contain the indexes.

8. Of the *PARÍŚIṢṬA PARVAN* or *STHAVIRÁVALI CHARITRA* by Hemachandra, a Jain work in Sanskrit verse on the first twelve Sthaviras or Patriarchs, Professor Dr. H. Jacobi, of Münster, has published another fasciculus.

9. Of the *PARÁSARA SMṚITI*, likewise, Pandit Chandrakānta Tarkā-lankāra has issued another fasciculus.

10. The *MÍMÁMSÁ DARŚANA* with Savara Svāmi's Commentary has been continued by Pandit Maheśa Chandra Nyayaratna, the Principal of the Sanskrit College, who has published one fasciculus.

11. The same learned editor has also issued one more fasciculus of his edition of the *TAITTIṚÍYA SAMHITÁ* with the commentary of Mádhava Achārya.

12. The Society's edition of the *NÍTISÁRA* by Kāmandakī has at last been brought to a close. The work was first commenced in 1849 by Dr. R. Mitra, who published the text in two fasciuli. Subsequently a Commentary was added of which Pandit Rāma Nārāyaṇa prepared one fasciculus, and, after his death, Pandit Jaganmohana published a second fasciculus in 1875. And now the third and last fasciculus has been published by Pandit Kāmākhyānātha Tarkaratna. The work treats of the political maxims of Chānakya, the minister of Chandra-Gupta, and is compiled by the minister's disciple Kāmandakī.

13. Of the *TATTVA CHINTÁMAṆI*, which was commenced during the past year, Pandit Kāmākhyānātha Tarkaratna has published one fasciculus.

The following works are in a more or less forward state of publication :

1. *ṬABAQÁT-I-NÁŠIRÍ* (Index of persons and places). 2. *LALITA VISTARA* (Translation). 3. *PRÁKRITA LAKṢHAṆA* (Translation and Notes). 4. *PRITHIRÁJ RÁSAU* (Text and Translation). 5. *KATANTRA* (Introduction). 6. *BṚHADDEVATÁ* (Text). 7. *PRÁKRITÁDHYÁYA* (Text and Translation). 8. *CHARAKA* (Translation with Notes). 9. *NAQÁID* (Text). 10. *LÁMÍYYET-EL-ARAB* (Text and Translation).

The undermentioned new works have been sanctioned for publication :

1. *Sanskrit.*

1. The *NYAYA VÁRTIKA* of Udyotkara Miśra. This work gives an exposition of the meaning of what is said, of what is left unsaid, and of what is ill or imperfectly said in the *Nyāya Aphorisms* of Gautama. It is held in high repute, but is exceedingly scarce. There are three or four MSS. available, one of which is an excellent one, old and very correct. The work will be edited by Pandit Vindhyeśwarī Prasāda Dviveda of Benares.

2. The *KĀLA VIVEKA*, by Jīmūta Vāhana, the author of the *Dāya-bhāga*. It is a treatise on appropriate times for religious ceremonies. Its astronomical disquisitions are of great value, and it is accepted as the leading authority on the subject it treats of. It will be edited by Pandit Madhu Sūdana Tarkaratna, a Professor of the Sanskrit College, from several MSS.

3. The *VIVĀDA RATNĀKARA*, a digest of the laws relating to Jurisprudence. It is held in high repute. Some six or seven MSS. are available, and the edition will be prepared by Pandit Dīna Nāth Nyāyaratna, a Professor of the Sanskrit College.

4. The smaller commentaries of the *Vedānta Sūtra*. There are five of these: 1st, *Vallabha Bhāshya*, which expounds the system of Epicurianism of the Hindús; 2nd, *Rámánúja Bhāshya*, which holds the human soul to be a creation of the Divinity; 3rd, *Vishṇu Bhāshya*, which holds that the human soul is a reflection of the Divine one; 4th, *Nemārka Bhāshya*, which holds the human soul to be subordinate to the Divine one, and 5th, the *Mādhava Bhāshya*, which teaches that the human soul is essentially and eternally distinct from the Divine one. These different theories have been all deduced from the *Vedānta*, and illustrate in a remarkable manner the different phases of philosophical thought among the Hindús. They are in fact protests against the theory of Sankara. All these five works are short; but at present there are only in the case of the two first mentioned sufficient MSS. available to proceed to an edition. These two editions will be entrusted to Pandit Hema Chandra Tarkaratna and Pandit Rámánātha Tarkaratna respectively.

5. The *KĀLA MĀDHAVĪYA* of Mādhava Āchārya. This will form a sequel to the same author's *Parāsara Mādhava*, which is now in course of publication. It will be edited by Pandit Chandrakānta Tarkálankāra, from a large number of MSS.

6. The *YOGINĪ TANTRA*, containing a history of Assam and Kúch Bihār. It will be edited by Mr. G. A. Grierson, C. S., from six MSS.

7. The *NĀRADA SMṚITI*, one of the standard authorities on Hindú Law. It is unique in interest, because no other Smṛiti is known to contain equally copious rules on judicial procedure and civil law. It will be edited by Professor J. Jolly, of Würzburg, from six good MSS. The text will be accompanied by the commentary of Āsakāya, as far as the latter goes.

8. A *MANU TĪKĀ SANGRAHA* or Extracts from various old Commentaries on Manu's law-book, also by Professor J. Jolly of Würzburg.

9. The *SĀNKHĀYANA ŚRAUTA SŪTRA*, to be edited by Professor A. Hillebrandt of Breslau.

10. Brahma Gupta's *KARĀṆA GRANTHA*, the so-called *Khaṇḍa Khādyā*, to be edited, with a translation and notes, by Dr. G. Thibaut.

The three last mentioned works had been sanctioned in 1883 (see Proc. for June, p. 109).

11. The *SVAYAMBHÚ PURĀṆA*, a Buddhist history of Nepal and

12. The *ASHTAŚĀHASRIKA PRAJÑĀ PĀRAMITĀ*.

The Society possesses one MS. of each of the two last mentioned works; that of the latter being very old and remarkably correct. As soon as one or two more MSS. have been procured, their publication will be taken in hand.

2. *Persian.*

13. The *SAFARNĀMAH* by Maula Sharfuddín Alí Yazdí. It gives the history of Tímúr, and is a large work. There are six MSS. in the Society's library, from which it will be edited by Maulvi Illáhdád, late 2nd Professor of the Calcutta Madrasah.

14. The *TÁRÍKH I FÍRÚZ SHÁHÍ*, by Shams i Shiráz Uffí, a history of Tímúr Sháh. Another history, bearing the same name and written by Zíá o Barní has already been published by the Society. This second work is an exceedingly rare one, and, if anything, more valuable than the one already published. There is at present one MS. available, which belongs to the Society; but there is every hope of one or two more being procurable from Lucknow and Rámpur. As soon as these have been obtained, the edition will be proceeded with by Maulvi Abúl Khair, Professor of Arabic and Persian in the Madrasah College, to whom it has been entrusted.

15. An English annotated translation of the first volume of the *MUNTAḤAB-UT-TÁWÁRIKH*, by Abdúl Qádir, the Badáoní. It will be prepared uniformly with Mr. Lowe's translation of the second volume, which is at present in course of publication. Maulvi Abúl Khair, of the Madrasah College, has been entrusted with the work.

16. The *TÁRÚL MA'ASIR* by Hasan Nizámí, one of the oldest Muhammadan histories of India, treating of the reigns of Qutb-ud-dín Ibak and Shams-ud-dín Iltimish.

17. The *TÁRÍKH I WASSAF* by the so-called Wassáf ul Hazrat a sort of general history of the Muhammadan world.

At present only one copy of each of the last two works is available. They are in the possession of the Society. A search is being made for other MSS., after receipt of which the editions will be taken in hand.

18. An English translation with notes of the *TÁRÍKH I YÁMINÍ* by Mr. L. White King, C. S.

Of the works in course of publication in 1885, the outturn may be reckoned at 40 fasciculi which, at the average rate of Rs. 432 for each, will cost Rs. 17,280. The average income being Rs. 13,695, there will be an excess of expenditure of Rs. 3,585 which represents the amount by which the unspent balance of Rs. 21,409 may be reduced.

The following is a detailed list of the publications issued in 1884.

Arabic-Persian Series.

1. IŞÁBAH, edited by Maulvi Abdul Hai of the Calcutta Madrasah, No. 249 (old Series) fasc. XXV, Vol. III, No. 6.
2. The AKBARNÁMAH by Abul-Fazl i Mubárak i Allami; edited by Maulvi 'Abdur Rahím, Professor, Calcutta Madrasah; Nos. 502, 503, Vol. III, Fasc. III: Nos. 514, 515, Fasc. IV; Nos. 524, 525, Fasc. V.
3. MUNTAKHAB-UT-TÁWÁRÍKH, by Abdul-Qádir Bin Maluk Sháh, known as Al-Badaoni, translated from the original Persian by W. H. Lowe, M. A., Hebrew Lecturer, Christ's College, Cambridge; Nos. 501, 521, Fasc. I, II.

Sanskrit Series.

4. CHATURVARGA CHINTÁMAÑI by Hemadri, edited by Pandits Yogesvara Smṛitiratna and Kámákhyánátha Tarkaratna; Nos. 504, 516, 518, Part I, Fasc. VII, VIII, IX.
5. NIRUKTA, with Commentaries, edited by Pandit Satyavrata Sámáśramí; Nos. 506, 508, 517, Vol. II, Fasc. II, III, IV.
6. ÁPASTAMBA ŚRAUTA SÚTRA, belonging to the Black Yajur Veda, with the commentary of Rudradatta, edited by Dr. Richard Garbe, Professor of Sanskrit in the University of Königsberg, Nos. 507, 520, Vol. II, Fasc. VIII, IX.
7. KATHÁ SARIT SÁGARA, or Ocean of the Streams of Story, translated from the original Sanskrit by C. H. Tawney, M. A., Principal, Presidency College; Nos. 509, 519, 523, Vol. II, Fasc. XI, XII, XIII.
8. STHAVIRÁVALI CHARITRA or PARÍŚIṢṬA PARVAN being an appendix of the Trishashti Laláka Purusha Charitra by Hemachandra; edited by Dr. Hermann Jacobi, Professor of Sanskrit and Comparative Philology in the Academy of Münster, Westphalia; No. 513, Fasc. II.
9. PARÁSARA SMṚITI, by Pandit Chandrakánta Tarkálankára; No. 505, Fasc. II.
10. MÍMÁMSÁ DARŚANA, with the commentary of Savara Svámin; edited by Mahesachandra Nyayaratna; No. 510, Fasc. XVII.
11. SAMHITÁ of the Black Yajur Veda, with the commentary of Mádhava Achárya; edited by Mahesachandra Nyayaratna; No. 522, Fasc. XXXIII.
12. NÍTISÁRA or Elements of Polity, by Kámandaki, with a commentary; edited by Pandit Kámákhyánátha Tarkaratna; No. 511, Fasc. V.
13. TATTVA CHINTÁMAÑI, edited by Pandit Kámákhyánátha Tarkaratna; No. 512, Fasc. I.

Centenary Meeting.

The Report for the past year would not be complete without a brief account of the Centenary Meeting.

This Special Meeting to celebrate the Hundredth Anniversary of

the Society was held on the 15th January, 1884, at 7-30 P. M., the Hon'ble H. J. Reynolds, B. A., C. S., President, in the Chair.

Six gentlemen, proposed at the last meeting of Council, were unanimously elected Special Centenary Honorary Members, on account of their distinguished services to various branches of Science. Their names have been already mentioned in a previous portion of the report.

A review of the Society's History during the century of its existence was laid upon the table, and a vote of thanks passed to the Compilers.

Addresses were then read from learned Societies, congratulating the Society on the celebration of its Centenary.

The Meeting was followed by a dinner, at which were present a large number of Members.

Among the guests were the Marquess of Ripon, Viceroy and Governor-General of India, Archbishop Goethals, Lieutenant-General T. F. Wilson, Professor Monier Williams, and several other gentlemen.

Among the toasts proposed were :

The Queen-Empress.

The Viceroy and Governor-General by the President.

The Viceroy returned thanks, and proposed

The Asiatic Society of Bengal, coupling with it the name of the President.

In replying, the Hon'ble H. J. Reynolds gave a brief sketch of the labours of the Society during the past hundred years, and concluded by proposing "Our Guests," coupling with it the name of Professor Monier Williams.

List of all Societies, Institutions, &c., to which the Publications of the Asiatic Society have been sent during the year, or from which Publications have been received.

* Allahabad :—Editor, Pioneer.

§ American Philological Association.

* Amsterdam :—Royal Zoological Society.

* Angers :—Société d' Etudes Scientifiques d' Angers.

* Baltimore :—Johns Hopkins University.

* Batavia :—Society of Arts and Sciences.

§ ——— :—Magnetic and Meteorological Observatory.

* ——— :—Kon. Natuurkundige Vereeniging in Nederlandsch-Indië.

* Berlin :—Royal Academy of Sciences.

§ ——— :—Entomologischer Verein.

§ Birmingham :—Birmingham Philosophical Society.

* Bombay :—Bombay Branch, Royal Asiatic Society.

* ——— :—Editor, Indian Antiquary.

- * Bombay :—Editor, Times of India.
- * Boston :—Natural History Society.
- * Bordeaux :—L' Académie Nationale des Sciences, Belles-Lettres et Arts.
- § ——— :—Société de Géographie Commerciale.
- * ——— :—Société Linnéene.
- * Brisbane :—Royal Society of Queensland.
- † Brunswick :—Verein für Naturwissenschaft.
- * Brussels :—L' Académie Royale des Sciences.
- * ——— :—Musée Royal d' Histoire Naturelle de Belgique.
- * ——— :—Société Entomologique de Belgique.
- * ——— :—Société Royale Malacologique de Belgique.
- § Buda Pest :—Royal Hungarian Academy of Sciences.
- * Buenos Ayres :—Public Museum.
- * ——— :—Academia Nacional de Ciencias de la Republica Argentina.
- * Calcutta :—Agri-Horticultural Society of India.
- * ——— :—Geological Survey of India.
- * ——— :—Editor, Englishman.
- * ——— :—Editor, Hindoo Patriot.
- * ——— :—Editor, Indian Daily News.
- * ——— :—Indian Mirror.
- * ——— :—Indian Museum.
- † ——— :—Mahommedan Literary Society.
- † ——— :—Public Library.
- * ——— :—Tuttobodhini Shova.
- † ——— :—University Library.
- † Cambridge :—University Library.
- † Cassel :—Der Verein für Naturkunde.
- † Cherbourg :—La Société Nationale des Sciences Naturelles.
- † Christiania :—University Library.
- * Clinton :—Editor, American Antiquarian and Oriental Journal.
- * Colombo :—Ceylon Branch, Royal Asiatic Society.
- * Copenhagen :—La Société Royale des Antiquaires du Nord.
- † Cuttack :—Cuttack Library.
- * Dehra Dun :—Great Trigonometrical Survey.
- † Dublin :—Royal Dublin Society.
- * ——— :—Royal Irish Society.
- § ——— :—Geological Society of Dublin.
- † Edinburgh :—Royal Society.
- § ——— :—Botanical Society.
- * Florence :—Società Italiana di Anthropologia e di Etnologia.
- * Frankfurt :—Senckenbergische Naturforschende Gesellschaft.
- * Geneva :—Société de Physique et d' Histoire Naturelle.
- † Genoa :—Museo Civico di Storia Naturale.

- * Graz :—Naturwissenschaftlichen Verein für Styria.
- § Hague :—Koninklijk Instituut voor de Taal-Land-en Volkenkunde van
Nederlansch-Indië.
- * Hamburg :—Naturhistorisches Museum zu Hamburg.
- * Halle :—Deutsche Morgenländische Gesellschaft.
- † — :—Die Kais. Leopoldinische-Carolinische Akademie.
- * Havre :—Société de Géographie Commerciale du Havre.
- * Helsingfors :—Société des Sciences de Finlande.
- § Ithaca (U. S. A.) :—Cornell University.
- * Königsberg :—Die physikalisch-Oekonomische Gesellschaft.
- * Lahore :—Editor, Civil and Military Gazette.
- § — :—Anjuman-i-Panjab.
- † — :—Agricultural Society.
- † Leyden :—Royal Herbarium.
- † Liège :—La Société Géologique de Belgique.
- † — :—La Société des Sciences.
- § Lille :—Société de Géographie.
- § Lisbon :—Geographical Society.
- † Liverpool :—Literary and Philosophical Society.
- * London :—Anthropological Institute.
- * — :—Editor, Academy.
- * — :—Editor, Athenæum.
- * — :—British Museum.
- * — :—Geological Society.
- * — :—Institution of Civil Engineers.
- * — :—Institution of Mechanical Engineers.
- * — :—Editor, Nature.
- * — :—Linnean Society.
- * — :—Royal Asiatic Society of Great Britain and Ireland.
- * — :—Royal Astronomical Society.
- * — :—Royal Geographical Society.
- * — :—Royal Institution.
- * — :—Royal Microscopical Society.
- * — :—Royal Society.
- * — :—Society of Telegraph Engineers.
- * — :—Statistical Society.
- * — :—Zoological Society.
- † Lyons :—La Société d' Agriculture, Histoire Naturelle et Arts Utiles.
- * — :—Le Muséum d' Histoire Naturelle.
- * — :—La Société d' Anthropologie.
- § — :—La Société de Géographie.
- † Madras :—Literary Society.

- * Madras :—Government Central Museum.
- † Manchester :—Literary and Philosophical Society.
- § Melbourne :—Royal Society of Victoria.
- * Moscow :—Société Impériale des Naturalistes.
- * ——— :—Imperial Society of Amateurs of Natural Sciences, Anthropology and Ethnology.
- * Munich :—K. Bayerische Akademie der Wissenschaften.
- * ——— :—Editor, Repertorium der Physik.
- † Netherlands :—Royal Society.
- † New Haven :—Connecticut Academy of Arts and Sciences.
- § ——— :—American Oriental Society.
- † Ottawa :—Geological and Natural History Survey of the Dominion of Canada.
- † Oxford :—Bodleian Library.
- † ——— :—Indian Institute.
- * Paris :—La Société de Géographie.
- * ——— :—Société d'Anthropologie.
- * ——— :—Société Asiatique.
- † ——— :—National Library.
- * ——— :—Société Zoologique.
- * ——— :—Société Académique Indo-Chinoise.
- § ——— :—Institution Ethnographique.
- * Philadelphia :—Academy of Natural Sciences.
- § ——— :—American Philosophical Society.
- * Pisa :—Società Toscana de Scienze Naturali.
- § Prague :—K. K. Sternwarte.
- § Princeton :—Princeton College.
- § Rio de Janeiro :—Museu Nacional.
- § Rome :—Società degli Spettroscopisti Italiani.
- § ——— :—R. Accademia dei Lincei.
- § Roorkee :—Editor, Professional Papers on Indian Engineering.
- § St. Petersburg :—Comité Géologique.
- † ——— :—Imperial Library.
- * ——— :—Russian Geographical Society.
- * ——— :—Académie Impériale des Sciences.
- § ——— :—Hortus Petropolitanus.
- * San Francisco :—Californian Academy of Arts and Sciences.
- * Schaffhausen :—Swiss Entomological Society.
- † Shanghai :—North China Branch, Royal Asiatic Society.
- * Simla :—United Service Institution of India.
- † Stettin :—Entomological Society.
- † Stockholm :—Royal Swedish Academy of Sciences.

- * Sydney :—Royal Society of New South Wales.
- * Toronto :—Canadian Institute.
- * Trieste :—Società Adriatica di Scienze Naturali.
- * Turin :—Reale Accademia delle Scienze.
- † Ulwar :—Ulwar Library.
- * Vienna :—Anthropologische Gesellschaft.
- § ——— :—K. K. Central-anstalt für Meteorologie und Erdmagnetismus.
- * ——— :—K. K. Akademie der Wissenschaften.
- * ——— :—K. K. Geologische Reichsanstalt.
- * ——— :—K. K. Zoologisch-Botanische Gesellschaft.
- § ——— :—Ornithologische Verein.
- * Washington :—Commissioners of the Department of Agriculture.
- * ——— :—Smithsonian Institution.
- § ——— :—U. S. Army Signal Service.
- * ——— :—United States Geological Survey.
- § ——— :—U. S. Coast and Geodetic Survey.
- * Wellington :—New Zealand Institute.
- * Württemberg :—Natural History Society.
- * Yokohama :—Asiatic Society of Japan.
- § ——— :—Editor, Chrysanthemum.
- * ——— :—German Oriental Society.
- * Zagreb :—Archæological Society.

ABSTRACT OF COUNCIL PROCEEDINGS.

January 31st. Ordinary Meeting.

Congratulatory addresses on the approaching celebration of the Society's Centenary were read from the following Societies :

Royal Prussian Academy of Sciences, Berlin.

German Oriental Society, Halle.

Royal Asiatic Society, London.

Royal Institute for the Philology, Geography and Ethnology of Netherlands-India, the Hague.

Royal Zoological and Anthropological, Ethnological Museum, Dresden.

It was ordered that the receipt of the addresses be acknowledged with thanks, and that a copy of the report of the Centenary Meeting be sent to those Societies.

* Societies, &c., which have received the Asiatic Society's publications, and have sent their publications in return.

† Societies, &c., which have received the Asiatic Society's publications, but have sent none in return.

§ Societies, &c., whose publications have been received, but to which nothing has been sent in return.

An exchange of publications was sanctioned with the Comité Géologique, St. Petersburg.

A letter was read from Professor J. Jolly, promising to send, at an early date, the MS. of his edition of the Selections from the Commentaries of Manu.

An application from the Straits Branch of the Royal Asiatic Society, for permission to republish Selections from the Asiatic Researches and the Society's Journal, was sanctioned.

It was resolved to subscribe for 2 copies of the "Punjab Notes and Queries" and of the Popular Edition of the Asiatic Researches.

An offer from Mr. J. F. Fleet to purchase one of the six copies left in stock of the Rajatarangani was accepted.

It was resolved that the report of the Centenary Meeting and of the Speeches at the Centenary Dinner be published in a Special No. of the Proceedings and also in the Centenary Review. Also that the three parts of the Review be bound together, and that each Editor receive 20 copies of the bound volume.

The Annual Report was read and approved; and the annual accounts for 1883 with the estimate of Receipts and Expenditure for 1884 were laid on the table.

Mr. J. Westland and Major J. Waterhouse were appointed Auditors of the annual accounts.

February 5th. Special Meeting.

The annual accounts for 1883 and the Budget Estimate of Income and Expenditure for 1884 were submitted and passed.

Mr. Bion, the Assistant Secretary, was granted seven months' leave from 1st April, provided the Catalogue and the Centenary Review were then satisfactorily completed.

February 28th. Ordinary Meeting.

Read a letter from the Meteorological Reporter to the Government of India, stating that he believed that the first part of "Die Temperatur Verhältnisse der Russischen Reiches," intended for his department, had by mistake been addressed to the Asiatic Society. It was ordered that the volume be transferred to the Meteorological Office Library.

At the suggestion of Messrs. Trübner and Co., it was resolved that all foreign periodicals should in future be sent through them instead of direct from the publishers.

The various Committees for the ensuing year were elected.

The Honorable H. J. Reynolds was elected a Trustee of the Indian Museum, on behalf of the Society, *vice* Mr. Eliot, resigned.

It was ordered that 100 copies of the Special Number of the Centenary Proceedings be printed separately for sale.

March 27th. Ordinary Meeting.

A letter was read from the Dewan to the Nawab Nazim of Murshedabad, remitting Rs. 300, as a compounding fee for his admission as a Life Member.

A donation of Rs. 300 to the Society's funds from the Hon'ble Raja G. N. Gazpatee Row was acknowledged with thanks.

On an application from the Director of the Indian Institute, Oxford, it was ordered that a copy of the Society's publications and the publications of the Bibliotheca Indica be presented to the Institute.

An offer from Mr. J. Beames to publish in the Journal a paper he was preparing on the Geography of India during the reign of Akbar was accepted.

The appointment by the Secretary of Mr. J. F. Duplessis, as Offg. Assistant Secretary, during the absence on leave of Mr. Bion, was approved.

May 1st. Ordinary Meeting.

On the recommendation of the Philological Secretary, Pandit Hemachandra was authorized to print his edition of the "Atharvana Upanishad" at his own press, the "Valmiki."

Letters were received from Dr. Joule, Monsieur S  nart, Professors Haeckel and Sayce, conveying their thanks for the great honour conferred on them by the Society in electing them Special Honorary Centenary Members; the letters were ordered to be read at the next meeting of the Society.

Read the Minutes of the Philological Committee regarding the large balance at the credit of the O. P. Fund. The Philological Secretary was instructed to make special arrangements for fresh publications.

It was resolved to subscribe to one copy of an Austrian monthly journal, the "Oesterrische Monattschrift f  r der Orient."

Mr. Tawney was elected a Member of Council, and was also asked if he would take up the work of the Philological Secretary during the absence on leave for 3 months of Dr. Hoernle.

A letter from Mr. Cecil Bendall, of the British Museum, asking the Society to try to gain subscribers to the facsimile reproductions of the Pal  ographical Society, was ordered to be read at the next meeting.

May 29th. Ordinary Meeting.

An advance for Rs. 300 to Dr. R. L. Mitra was sanctioned for the purchase of a large number of Jain Manuscripts.

A letter from Mr. Charles Meldrum, in charge of the Mauritius Observatory, thanking the Society for the honour done to him by his election as a Special Centenary Honorary Member was ordered to be read at the next General Meeting.

An exchange of publications was sanctioned with the "Naturwissenschaftlichen Vereins" of Styria.

A presentation of the Proceedings of the Birmingham Philosophical Society was accepted with thanks.

A letter from Mr. F. K. Hervey, expressing a wish to obtain a photograph of an undeciphered inscription on a Singapore Stone presented to the Society in 1848, was ordered to be transferred to the Trustees of the Indian Museum.

On the proposal of Mr. Tawney, it was ordered that a copy of the Sanskrit Series of the Bibliotheca Indica be presented to Mr. Cecil Bendall of the British Museum and to Dr. Hjalmar Edgren of Lund, Sweden.

The Secretary reported that the Library Catalogue was at last published and was being distributed to Members.

Mr. Wood-Mason reported he had returned from furlough, and had relieved Mr. de Nicéville who had officiated during his absence.

A vote of thanks to the latter was unanimously recorded.

June 26th. Ordinary Meeting.

Presentations from Mr. Charles Meldrum, in charge of the Observatory, Mauritius, and from Dr. G. Badaloni, Member of several Italian Medical Societies, of several of their publications were accepted with thanks.

An exchange of publications with the Society of Amateurs of Natural Sciences, Anthropology and Ethnology, of Moscow, was sanctioned.

It was resolved to subscribe for one copy of a German publication, the "Literatur-Blatt für Orientalische Philologie."

A letter from the President of the American Association for the advancement of Science, inviting members to attend their annual meeting to be held in Philadelphia on the 3rd September, was ordered to be communicated to the Society, with a recommendation that an application be made to Government for permission to depute Major Waterhouse to represent the Society.

Messrs. Trübner and Co. were accorded permission to return part of their stock of the Bibliotheca Indica, Arabic and Persian Series, which had a very small sale in Europe, and also part of the Journal stock from 1832 to 1870.

A proposal from Mr. G. A. Grierson to edit the "Yogini Tantra" was accepted on the recommendation of the Philological Committee.

In reply to an application from the "Société de Géographie Commerciale du Havre" for an interchange of publications, it was ordered that a copy of the Proceedings be sent.

On the proposition of the Natural History Secretary, it was resolved that the Council propose to the Society at their next meeting, that Mr. F.

Moore be elected an Associate Member on account of his contributions to Indian Entomology.

The price of the New Library Catalogue to non-members was fixed at Rs. 3-8 per copy.

The Philological Secretary having announced the death on the 22nd June of Dr. H. W. McCann, the General Secretary, it was resolved that Mr. F. E. Pargiter be asked to fill the post thus left vacant.

Major J. Waterhouse kindly offered to carry on the work until Mr. Pargiter's acceptance had been received.

The Council placed on record their sense of the loss the Society has sustained by the untimely death of Dr. McCann, and their deep regret at the sad event which has deprived it of an energetic and valuable officer and a most esteemed colleague.

July 31st. Ordinary Meeting.

A letter from Mr. W. A. Holwell, Quebec, enclosing photographs of the late Governor Holwell, and requesting that a copy of Mr. Bayne's paper on the further excavations of old Fort William be sent to him when published, was ordered to be read at the next General Meeting.

It was resolved that the unexpended balance of a sum of Rs. 1000, which had been placed to the credit of the Society by the late Dr. Muir for publishing an English translation of Sankara Acharya's commentary on the Aphorisms of the Vedanta, be returned to the Trustees of his estate.

The Secretary reported that Messrs. Trübner and Co.'s accounts for 1883 had been examined and found correct, with the exception of a few trifling discrepancies which they had been asked to rectify.

It was resolved to subscribe to one copy each of two works edited by Captain R. C. Temple, viz., "'Umdat-u-t-Tawárikh" and a Dictionary of Hindustani Proverbs.

A letter was read from the Government of India stating that the cost of a copy of the Isabah, which the Society had applied for, would be £41. It was resolved not to proceed further in the matter, as there was no guarantee that the copy would be a correct one.

Major J. Waterhouse reported that, being unable to obtain leave to represent the Society at the Meeting of the American Association for the Advancement of Science, he had asked Mr. W. T. Blanford to act as the Society's representative on the occasion.

Mr. Pargiter's acceptance of the post of General Secretary was recorded; and his election as a Trustee of the Indian Museum confirmed.

Professor Jolly's proposal to edit the Narada Smriti in the Bibliotheca Indica was accepted.

On the recommendation of the Philological Secretary, the publication of 11 Sanskrit and 6 Persian works was sanctioned in the Bibliotheca Indica. A detailed list with full particulars will be found under the section "Bibliotheca Indica."

Mr. John Boxwell, Maulvi Khudabuksh Khan and Colonel Jarrett were elected Members of the Philological Committee.

August 28th. Ordinary Meeting.

Sundry brass articles, presented by Lieut.-Col. Malcolm G. Clerk were ordered to be transferred to the Indian Museum.

A letter was read from Kaviraj Samal Das Ji of Oodeypore asking for the loan of a large number of Persian and Arabic Manuscripts. It was resolved that the rule, which restricted to two the number of MSS. that could be lent out, could not be relaxed.

A letter was read from Professor Monier Williams thanking the Society for the presentation to the Indian Institute of a complete collection of the Society's publications.

At the suggestion of the Philological Secretary, Moulvi Abdul Khair was authorized to undertake the Tarikh-i-Firoz Shahi (already sanctioned by Council) instead of the Tusak-i-Timuri, with which he could not proceed for want of Manuscripts.

A proposal from Mr. G. A. Grierson to affiliate to the Society the Bihar Branch, which it was intended to establish in Patna, was agreed to.

On the recommendation of the Natural History Committee, it was resolved that a copy of all the publications issued in connection with the International Fisheries Exhibition in South Kensington be purchased for the Society's Library.

An exchange of Journal, Part II, with the Proceedings of the Royal Society of Queensland was sanctioned.

Dr. Rájendralala Mitra having rendered an account of the advances made to him up to date, a further advance of Rs. 800 was sanctioned.

Babu Pratapa Chandra Ghosha was elected a Member of Council.

October 30th. Ordinary Meeting.

A letter from Mr. Rivett-Carnac, enclosing his paper on Sankissa with illustrative sketches, was ordered to be brought up early next year.

A letter from Mr. F. Moore, expressing his thanks for his election as an Associate Member, was ordered to be read at the Society's next Meeting.

An exchange of the Society's Journal, Part II, with the Bulletin of the Société Entomologique de Belgique was sanctioned.

An estimate for printing 500 copies of a single Fasciculus of the Bibliotheca Indica for Rs. 154, paper included, from Babu Harish-chandra Kaviratna was accepted.

An exchange was sanctioned of the Society's Proceedings and Journal, Part II, with the "Boletin" and "Actas" of the Academia Nacional de Ciencias of the Argentine Republic, and a similar exchange with the publications of the Natural History Museum of Hamburg.

An exchange of the Society's Journal, Part I, and Proceedings was offered with the "Annales" of the Musée Guimet, Lyon.

An exchange of the Society's Proceedings with the Bulletin of the Société d'Etudes Scientifiques d'Angers was also sanctioned.

The Philological Secretary reported that a silver coin received from Col. Clerk had been lost by a peon of Messrs. Newman and Co., who had been charged to prepare a wood-cut, and that they had been informed that they would be held responsible for the loss.

A copy of the correspondence was sent to Col. Clerk, and Messrs. Newman were asked for an account of what had since transpired.

An offer from Dr. Behari Lall Gupta to continue the translation of the "Susruta," which has been suspended by the death of Dr. Uday Churn Dutt, was accepted.

The publication in the Bibliotheca Indica of a translation of the Tarikh-i-Tamini by Mr. L. White King was sanctioned.

The Society's Proceedings and Journal, Part II, were ordered to be sent to the Natural History Section of the British Museum, South Kensington, in addition to the copy sent to the Library in Bloomsbury.

Mr. H. Beverley was elected a Member of Council.

November 27th. Ordinary Meeting.

Read an extract from the Proceedings of the Government of India in the Home Department, regarding alterations in the Treasure Trove Act. It was resolved that a list be kept in which members interested in numismatic research may inscribe their names.

The Editorship of the Prithiraj Rasau was at Dr. Hoernle's request transferred to Pandit Gopal Sastri of Benares.

Extracts from Major Macgregor's "Notes on Akas and Akaland" presented by the author were ordered to be read at the next meeting of the Society, and published in the Proceedings.

Mr. H. B. Medlicott was elected a Member of Council.

Mr. Bion's resignation of his post of Assistant Secretary was recorded, and his application for a bonus on account of work done in compiling the Library Catalogue was ordered to be circulated to Council.

An application from Mr. Duplessis for the post about to be vacant was ordered to be circulated to Council, with others that might be received.

December 23rd. Ordinary Meeting.

Read a letter from Mr. H. F. Blanford announcing his departure from India, and tendering his resignation as President of the Society

It was resolved that as his leave was for 3 months only, his post did not become vacant.

The printing of the Ramanuja Bhashya by the Valmiki Press was sanctioned on the same terms as those agreed upon with the Girisa Vidyaratna Press.

At the suggestion of Dr. R. L. Mitra, a yearly grant of about Rs. 200 was sanctioned from the O. P. Fund for the purchase of Sanskrit, Persian and Arabic publications.

On a representation from the authors, an additional subscription of 2 guineas per copy of the "Rhopalocera Malayana" was sanctioned.

A bonus of Rs. 600 was granted to Mr. Bion for his services in connexion with the Library Catalogue; and the General Secretary was authorized to give him a Certificate expressing the Society's satisfaction with his work. The selection of a fresh Assistant Secretary was at the same time left in the hands of the General Secretary.

It was resolved to subscribe to one copy of the Rev. J. H. Knowles' Dictionary of Kashmiri Proverbs and Sayings.

A copy of Major Jarrett's translation of the "Tarikh-ul-Khulfa" was ordered to be presented to the Madrassah Library.

On a reference from the Secretary, it was ordered that the rule for submission to Council previously of the names of gentlemen proposed for Membership be observed in future.

The List of Office-bearers and Members of Council for the ensuing year was prepared for circulation to Members of the Society in accordance with Rule 44.

On the suggestion of the Secretary it was resolved that Lord Dufferin be asked to become the Patron of the Society.

The Report having been read, the President invited the Meeting to put any questions or to offer any remarks which any Member might think necessary in connexion therewith.

No remarks having been made, the President moved the adoption of the Report, and proposed a vote of thanks to the Honorary Secretaries and to the Honorary Treasurer for their exertions on behalf of the Society.

The motion was unanimously carried.

The PRESIDENT announced that the Scrutineers reported the result of the election of Office-bearers and Members of Council to be as follows :—

President.

Dr. Rajendralala Mitra, C. I. E.

Vice-Presidents.

Hon. J. Gibbs, C. S., C. I. E.
D. Waldie, Esq., F. C. S.
H. F. Blanford, Esq., F. R. S.

Secretaries and Treasurers.

J. Wood-Mason, Esq.
Dr. A. F. R. Hoernle.
F. E. Pargiter, Esq., B. A., C. S.
F. W. Peterson, Esq., F. C. S.

Other Members of Council.

Hon. J. Reynolds, B. A., C. S.
H. B. Medlicott, Esq.
J. Westland, Esq., C. S.
Nawab Abdul Latif Khan Bahadur.
Major J. Waterhouse.
Alex. Pedler, Esq., F. C. S.
C. H. Tawney, Esq., M. A.
Babu Pratapa Chandra Ghosha.
E. F. T. Atkinson, Esq., B. A., C. S.
Dr. Mahendralal Surkar.

The following gentlemen were appointed Auditors to examine and report on the accounts of the past year :

J. Westland, Esq., C. S.
J. C. Douglas, Esq.

The Meeting was then resolved into the Ordinary Monthly General Meeting.

HON. J. GIBBS, C. S. I., in the Chair.

The minutes of the last meeting were read and confirmed.

Twelve presentations were announced, details of which are given in the Library List appended.

The following gentlemen, duly proposed and seconded at the last meeting, were ballotted for and elected Ordinary Members.

1. J. W. Oliver, Esq.
2. Babu Haraprasad Sastri, M. A.
3. Pandit Maheschandra Nyayaratna.
4. Raja Surya Kanta Chaudhuri Bahadur.

The following gentlemen are candidates for election at the next meeting :

1. Syed Ali Bilgrani, B. A., A. R. S. M., F. G. S., proposed by J. Wood-Mason, Esq., seconded by T. H. Hughes, Esq.
2. Spencer Gore-Brown, Esq., proposed by E. F. T. Atkinson, Esq., seconded by C. H. Tawney, Esq.
3. C. W. Bolton, Esq., C. S., proposed by F. E. Pargiter, Esq., B. A., C. S., seconded by Major J. Waterhouse.
4. Mr. A. F. M. Abdur Rahman, proposed by D. Waldie, Esq., seconded by Hon. J. Gibbs.
5. Kumar Nil Krishna, proposed by Nawab Abdul Latif Khan Bahadur, seconded by Hon. J. Gibbs.
6. H. M. Rustomjee, Esq., proposed by Dr. Rajendralala Mitra, seconded by Hon. J. Gibbs.
7. Babu Rajkumar Sarbadhikari, proposed by Dr. Rajendralala Mitra, seconded by H. B. Medlicott, Esq.

The Chairman reported that the Council had sanctioned the issue in Bibliotheca Indica of the Prayaścitta portion of the Institutes of Parásara, to be edited by Babu Krishna Kamal Bhattacharjya.

The following paper has been received and will be read at the next meeting.

On the Kings of the Suffarian Dynasty of Nimron or Sijistan.—By MAJOR H. G. RAVERTY.

LIBRARY.

The following additions have been made to the Library since the meeting held in January last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Amsterdam. Koninklijk Zoologisch Genootschap Natur Artis Magistra,—Bijdragen tot de Dierkunde, Part 10, No. 1.
- . —————. Tijdschrift voor de Dierkunde, Vol. V, Part I.
- Baltimore. Johns Hopkins University,—American Journal of Philology, Vol. V, No. 3.
- . —————. Circulars, Vol. IV, No. 35.
- . —————. Studies from the Biological Laboratory Vol. III, No 2.
- Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen,—Notulen, Vol. XXII, Parts 2 and 3.
- . —————. Tijdschrift, Vol. XXIX, Parts 5 and 6.

- Berlin. Entomologischer Verein,—Zeitschrift, Vol. XXVIII, No. 2.
 ——. K. preuss. Akademie der Wissenschaften,—Sitzungsberichte, Nos. 18—39, 1844.
- Bombay. Indian Antiquary,—Vol. XIV, Part 166, January, 1885.
- Chicago. American Antiquarian and Oriental Journal,—Vol. VI, No. 6, November, 1884.
- Copenhagen. K. Nordiske Oldskrift-Selskab,—Aarboger, Part 3, 1884.
- Frankfurt. Senckenbergische Naturforschende Gesellschaft,—Abhandlungen, Vol. XIII, No. 4.
- The Hague. Koninklijk Instituut voor de Taal-Landen Volkenkunde van Nederlandsch Indië,—Bijdragen, Vol. IX, No. 4.
- Hamilton. Hamilton Association,—Journal and Proceedings, Vol. I, Part I, 1882—1883.
- Lahore. Aujuman-i-Punjab,—Journal (English Section), Vol. V, Nos. 1—4.
- London. Academy,—Nos. 659—662.
 ——. Anthropological Institute of Great Britain and Ireland,—Journal, Vol. XIV, No. 2, November, 1884.
 ——. Athenæum,—Nos. 2982—2985.
 ——. Geological Society,—Quarterly Journal, Vol. XL, Part 4, November, 1884.
 ——. ———. List of Fellows, November 1st, 1884.
 ——. Institution of Civil Engineers,—Minutes of Proceedings, Vol. LXXVIII.
 ——. Institution of Mechanical Engineers,—Proceedings, No. 3, August, 1884.
 ——. Brief Subject-Index, Vols. LIX—LXXVIII.
 ——. Nature,—Vol. XXXI, Nos. 790—793.
 ——. Royal Institution of Great Britain,—Proceedings, Vol. X, Part 3.
 ——. Zoological Society,—Proceedings, Part 3, 1884.
- Munich. Repertorium der Physik, Vol. XX, No. 12.
- Paris. Americana. Bulletin du Bouquiniste,—Series IV, No. 1.
 ——. Journal Asiatique,—Vol. IV, (Series VIII), No. 2.
 ——. Société de Géographie,—Bulletin, Vol. V. (Series VII), No. 4.
 ——. ———. Compte Rendu des Séances, Nos. 18 and 19, 1884.
 ——. Société Géologique,—Bulletin, Vol. IX, No. 5.
- Philadelphia. Academy of Natural Sciences,—Proceedings, Vol. VIII, 1856; Part 2, May to October, 1884.
- Roorkee. Professional Papers on Indian Engineering, Vol. II (Series III), No. 8, December, 1884.
- St. Petersburg. Comité Géologique,—Mémoires, Vol. I, No. 3.

St. Petersburg. Comité Géologique. Proceedings, Vol. III, Nos. 6 and 7.
 ———. Horti Petropolitani,—Acta, Vols. VIII, No. 3; IX,
 No. 1.

Toronto. Canadian Institute,—Proceedings, Vol. II, No. 3, October,
 1884.

Washington. War Department, Army Signal Service,—Professional
 Papers, No. 14.

BOOKS AND PAMPHLETS,

presented by the Authors and Publishers.

BONAPARTE, PRINCE ROLAND. Les Habitants de Suriname; notes re-
 cueillies à l'Exposition Coloniale d'Amsterdam. Fol. Paris, 1884.

ROY. P. C. Mahabharata, Part XIII, 8vo. Calcutta, 1885.

MISCELLANEOUS PRESENTATIONS.

Nederlandsch Nieuw Guinea En de Papoeshe Eilanden, by A. Haga from
 1500—1883, 8vo. Batavia, 1884.

BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN.

Report on the Administration of the Customs Department in the Bengal
 Presidency for the year 1883-84. Fcp. Calcutta, 1884.

Report on the External Trade of Bengal with Nepal, Sikkim and Bhu-
 tan for the year 1883-84. Fcp. Calcutta, 1884.

Returns of the Rail-borne Traffic of Bengal during the quarter ending
 30th September, 1884. Fcp. Calcutta, 1884.

BENGAL GOVERNMENT.

Catalogue of Sanskrit Manuscripts in Mysore and Coorg, by Lewis Rice,
 M. R. A. S. 8vo. Bangalore, 1884.

CHIEF COMMISSIONER, COORG.

Pacific Coast Pilot—Alaska, by W. H. Dall, Part I. 8vo. Washington,
 1883.

REV. C. H. A. DALL.

A set of 27 Photographs of the Caves of Ajunta. Fol. Bombay, 1884.

HOME DEPARTMENT.

Annual Report of the Lunatic Asylums in the Madras Presidency for
 1883-84. Fcp. Madras, 1884.

Annual Report of the Madras Medical College, Session 1883-84. Fcp.
 Madras, 1884.

MADRAS GOVERNMENT.

International Meteorological Observations, October 1883. 4to. Washing-
 ton, 1884.

Monthly Weather Review, October, 1884. 4to. Washington, 1884.

METEOR. REPORTER TO THE GOVERNMENT OF INDIA.

Report on the Explorations in Great Tibet and Mongolia made by A. K.
 in 1879-82, by J. B. N. Hennessey. Fcp. Dehra Dun, 1884.

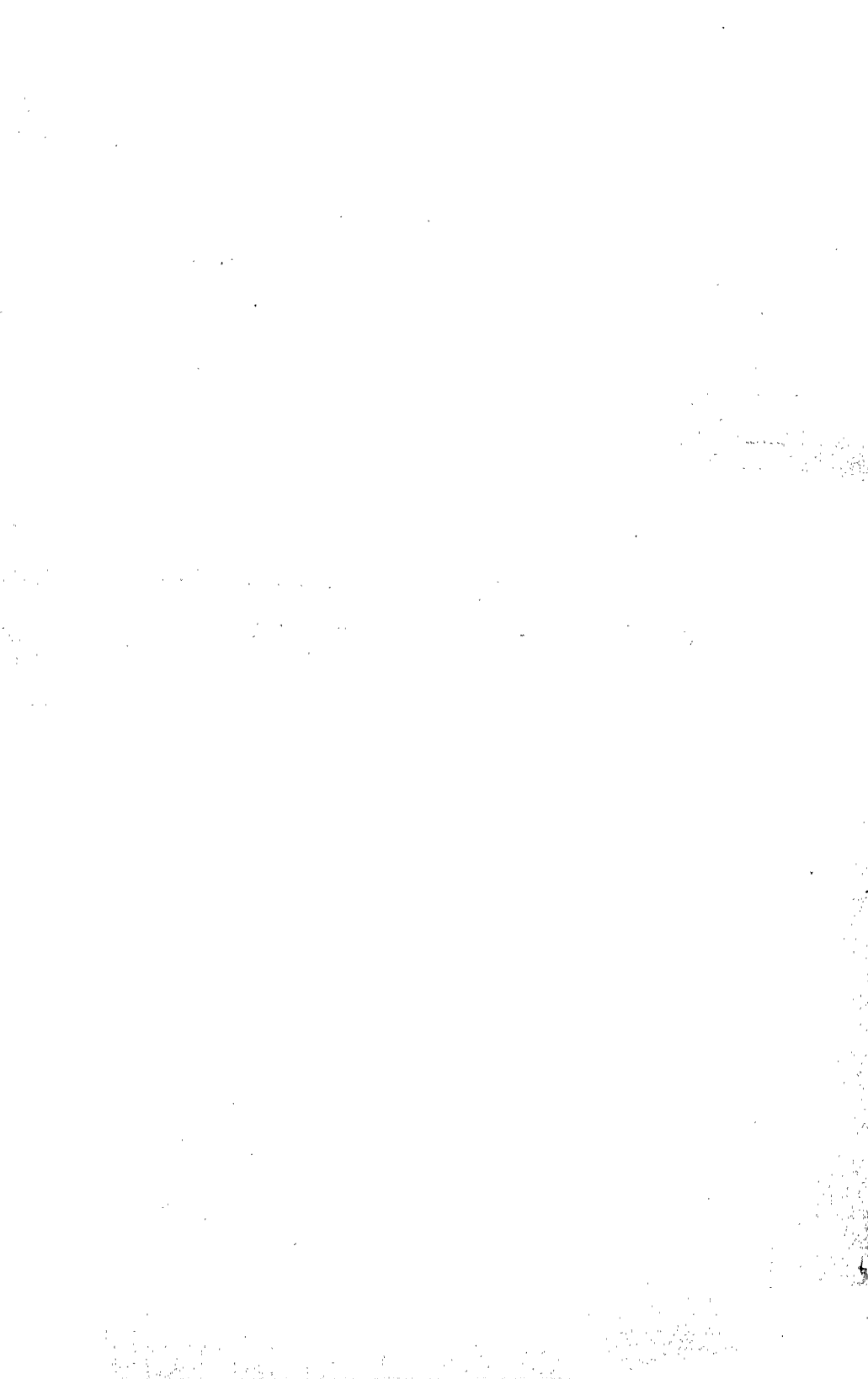
TRIGONOMETRICAL SURVEY OF INDIA,

PERIODICALS PURCHASED.

- Allahabad. Punjab Notes and Queries,—Vol. II, No. 16, January, 1885.
 Berlin. Deutsche Litteraturzeitung,—Vol. V, Nos. 45—47.
 Calcutta. Indian Medical Gazette,—Vol. XX, No. 1, January, 1885.
 Cassel. Botanisches Centralblatt,—Vol. XX, Nos. 5 and 6.
 Geneva. Archives des Sciences Physiques et Naturelles,—Vol. XII, No. 12.
 Giessen. Jahresbericht über die Fortschritte der Chemie,—Parts 4, 1882; 2, 1883.
 Leipzig. Annalen der Physik und Chemie,—Beiblätter, Vol. VIII, No. 12.
 ———. Literatisches Centralblatt,—No. 46, 1884.
 ———. Literatur-Blatt für Orientalische Philologie,—Vol. I, No. 12.
 London. Annals and Magazine of Natural History,—Vol. XIV (Series V), No. 84, December, 1884.
 ———. Chemical News,—Vols. I, Nos. 1308 and 1309; II, Nos. 1310 and 1311.
 ———. Entomologist's Monthly Magazine,—Vol. XXI, No. 247, December, 1884.
 ———. London, Edinburgh and Dublin Philosophical Magazine,—Vol. XVIII (Series V), No. 115, December, 1884.
 ———. Nineteenth Century,—Vol. XVI, No. 94, December, 1884.
 ———. Numismatic Chronicle,—Part 3, 1884.
 ———. Publishers' Circular,—Vol. LXVII, Nos. 1134 and 1135.
 ———. Society of Arts,—Journal, Vol. XXXIII, Nos. 1674—1677.
 New Haven. American Journal of Science,—Vol. XXVIII (Series III), No. 167, November, 1884.
 Paris. Revue Critique,—Vol. XVIII, Nos. 46 and 47.
 ———. Revue des Deux Mondes,—Vol. LXVI, No. 2.
 Vienna. Orientalische Museum,—Oesterreichische Monatsschrift für den Orient, Vol. X, No. 12.

BOOKS PURCHASED.

- Palæographical Society. Facsimiles of Ancient Manuscripts. Oriental Series. Part VIII. Fol. London, 1883.
 Report of H. M. S. "Challenger" Zoology, Vol. X. 4to. London, 1885.
 STEEL, F. A. and TEMPLE, R. C.—Wide-Awake Stories,—a collection of Tales told by little children, between sunrise and sunset, in the Punjab and Kashmir. 8vo. Bombay, 1884.
 TEMPLE, CAPTN. R. C. Legends of the Punjab, No. 17. 8vo. Bombay, 1884.
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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR MARCH, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th March, 1885, at 9 P. M.

DR. RAJENDRALÁLA MITRA, C. I. E., President, in the Chair.

The minutes of the last meeting were read and confirmed.

Twenty-two presentations were announced, as detailed in the Library List appended.

The following gentlemen, proposed and seconded at the last meeting, were balloted for and elected Ordinary Members :

1. Syad Áli Bilgrámi, B. A., A. R. S. M., F. G. S.
2. Spencer Gore-Brown, Esq.
3. C. W. Bolton, Esq., C. S.
4. Mr. A. F. M. Abdur Rahmán.
5. Kumár Nílakrishna.
6. H. M. Rustomjee, Esq.
7. Bábu Rájakumár Sarvádrikári.

The following gentlemen are candidates for election at the next meeting :—

1. Kumár Saratchandra Singh, proposed by Nawáb Abdul Latif, Khán Bahádur, seconded by B. L. Gupta, Esq.
2. J. W. Chambers, Esq., proposed by R. R. Bayne, Esq., seconded by F. W. Peterson, Esq.
3. Bábu Yadunáth Sen, proposed by Babu Pratápachandra Ghosha, seconded by Dr. Mahendralál Sarkár.
4. Bábu Yogendranáth Mallik, proposed by Bábu Pratápachandra Ghosha, seconded by Dr. Mahendralál Sarkár.

5. H. Martyn Clark, Esq., M. B., proposed by C. J. Rodgers, Esq., seconded by F. E. Pargiter, Esq.

6. Bábu Narendranáth Sen, proposed by Dr. Rájendralála Mitra, seconded by Bábu Pratápachandra Ghosha.

7. Maulvi Syad Mahdi Áli, Nawáz Jang Bahádur (of Hyderabad), proposed by Nawáb Abdul Latif, Khán Bahádur, seconded by C. H. Tawney, Esq., M. A.

The following gentleman has intimated his wish to withdraw from the Society :

Rái Sohan Láíl.

The SECRETARY announced the death of Bábu Adharlál Sen, an Ordinary Member of the Society.

The CHAIRMAN reported that Mr. J. Low, and Lt.-Col. J. G. Forbes were largely in arrears of subscription, and though registered letters had been sent to them in accordance with Rule 37, no notice had been taken of them. Their names would therefore be suspended for a month as defaulters in the Society's Meeting-room, and unless the sums due were paid in the meantime, they will be declared removed from the Society's Member List at the next meeting. In accordance with Rule 38, this fact will be notified in the Proceedings.

The SECRETARY reported that Mr. Baden Henry Baden-Powell had remitted a compounding fee in payment of all his future subscriptions.

The SECRETARY read the names of the following gentlemen who had been appointed by the Council to serve on the several Committees during the current year.

FINANCE COMMITTEE.

H. B. Medlicott, Esq.

Alex. Pedler, Esq.

J. C. Douglas, Esq.

E. F. T. Atkinson, Esq.

Major J. Waterhouse.

LIBRARY COMMITTEE.

H. F. Blanford, Esq.

H. B. Medlicott, Esq.

Dr. D. Waldie.

Major J. Waterhouse.

C. H. Tawney, Esq.

Dr. Mahendralal Sarkár.
D. D. Cunningham, Esq.
Bábu Pránnáth Pandit.
Bábu Pratápachandra Ghosha.
E. F. T. Atkinson, Esq.
A. Pedler, Esq.

PHILOLOGICAL COMMITTEE.

Nawáb Abdul Latif, Khán Bahádur.
Rev. K. M. Banerjea.
J. Beames, Esq.
F. S. Growse, Esq.
Dr. G. Thibaut.
C. J. Lyall, Esq.
G. A. Grierson, Esq.
C. H. Tawney, Esq.
Syad Ahmad, Khán Bahádur.
Col. A. C. Toker.
J. Boxwell, Esq.
Moulvi Khudábaksh Khán.
Col. H. S. Jarrett.
Pandit Mahesachandra Nyáyaratna.
Bábu Haraprasáda Sústrí.
Bábu Pratápachandra Ghosha.

NATURAL HISTORY COMMITTEE.

H. B. Medlicott, Esq.
Dr. G. King.
A. O. Hume, Esq.
S. E. Peal, Esq.
Dr. D. D. Cunningham.
R. D. Oldham, Esq.
L. de Nicéville, Esq.
E. F. T. Atkinson, Esq.
Bábu P. N. Bose.
Dr. Mahendralál Sarkár.
Dr. J. Scully.

PHYSICAL SCIENCE COMMITTEE.

H. F. Blanford, Esq.
H. B. Medlicott, Esq.
Dr. D. Waldie.
Major J. Waterhouse.

Alex. Pedler, Esq.
Rev. Father E. Lafont.
Dr. Mahendralál Sárkár.

COIN COMMITTEE.

Hon. J. Gibbs.
Major Genl. A. Cunningham.
J. H. Rivett-Carnac, Esq.
Major W. F. Prideaux.
C. J. Rodgers, Esq.
V. A. Smith, Esq.

HISTORY AND ARCHÆOLOGY COMMITTEE.

Hon. J. Gibbs.
Major General A. Cunningham.
R. R. Bayne, Esq.
J. Beames, Esq.
Bábu Pratápachandra Ghosha.
F. S. Growse, Esq.
Bábu Pránnáth Pandit.
J. H. Rivett-Carnac, Esq.
Captain R. C. Temple.
Amir Ali, Esq.
E. F. T. Atkinson, Esq.

The SECRETARY read the following circular letter from the Royal Academy of Sciences, Turin, offering for competition the Bressa Prize of the value of 12,000 Italian Lire.

"The Royal Academy of Sciences of Turin, in accordance with the last will and testament of Dr. Cesare Alessandro Bressa and in conformity with the Programme published December 7th, 1876, announces that the term for competition for scientific works and discoveries made in the four previous years 1881-84, to which only Italian authors and inventors were entitled, was closed on December 31st, 1884.

"The Academy now gives notice that from the 1st of January, 1883 the new term for competition for the fifth Bressa Prize has begun, to which, according to the testator's will, scientific men and inventors of all nations will be admitted. A prize will therefore be given to the scientific author or inventor, whatever be his nationality, who during the years 1883-86 "according to the judgment of the Royal Academy "of Sciences of Turin, shall have made the most important and useful "discovery, or published the most valuable work on physical and experimental Science, Natural History, Mathematics, Chemistry, Phy-

“siology and Pathology, as well as Geology, History, Geography and “Statistics.”

“The term will be closed at the end of December 1886.

“The value of the prize amounts to 12,000 Italian Lire.

“The prize will in no case be given to any of the National Members of the Academy of Turin, resident or non-resident.

A. FABRETTI,

The President of the R. Academy.”

Turin, January 1st, 1885.

Read a letter from the Magistrate of Patna forwarding for presentation to the Society a couple of old Buddhist Coins which the owner has presented to Government for this purpose and wishes the Government to be considered as the donor.

The CHAIRMAN reported that the Council had sanctioned the publication in the Bibliotheca Indica of the whole of the Institutes of Parásara, instead of only the Práyaschitta section of it as previously sanctioned.

The CHAIRMAN exhibited a copper-plate inscription forwarded to him by Bábu Nílakaṇṭha Mazumdár, of Dacca, and referred to the peculiarities of certain dates in it.

DR. MITRA remarked that the plate had been found, several feet under the earth, at Ashrafpur, Station Raipur, Zillah Dacca, when levelling a mound in the neighbourhood of a tank, and is now the property of Bábu Pratápachandra Banerji of that place. It measures 10" × 6"-5, and is encrusted on each side with a uniform layer of verdigris. The edges are much corroded, and the letters near them have become illegible. In the middle of the plate, the letters are, however, clear, and they show the record to be a muniment of the grant of one or more plots of land by one Deva Khadga, which is apparently a poetical inversion of Khadgadeva. The donees were Buddhists, who had charge of a Vihára or monastery, to the support of which the proceeds of the land were to be applied. The donor was also of the same persuasion, though the legend on his seal is a couchant bull. The mention of a vihára is of some importance, as affording a trace of the existence of Buddhism in the eastern districts at an early period. The name on the seal is not legible.

Owing to the illegibility of the beginning and end of every line, it is impossible to produce a connected translation of the whole record, but a tentative reading, prepared by Paṇḍit Kámákhyánáth Tarkaratna, of the Calcutta Sanskrit College, was submitted.

The most important part of the record is the date. Its letters and figures are perfectly clear in their outlines, and there is no reason to doubt the correctness of the reading (see Plate II). The first two letters of the date (in line 15) are unmistakably *Samva*, an abbreviation of *Samvat*. Then follow three figures of which the last is unquestionably a Nágari 3, and the first may be accepted either as a 7, or a 9. Its exact counterpart had nowhere been seen. It makes some approach to a modern Bengali 7, and also to the Valabhi 9, but to no other figure of any of the different ancient Indian systems of numerals known to us. Dr. Mitra took it for 7. The second figure has been often met with in ancient records, and has been accepted by all the later antiquarians and epigraphists to be a symbol for 100. It is formed of two arched lines joined to each other by their nearest legs by a slight curvature, and the off leg of the right hand circle drawn downwards in a line and terminating in a spur projecting forward. In ancient inscriptions these details are not constant. In Prinsep's facsimiles, as given in Mr. Thomas' edition of his essays, the juncture of the two arches is indicated by a point, but in the *Indian Antiquary*, Vol. XI, p. 270, the slight curvature is clear. The line in front is sometimes straight and sometimes curved, and the spur is not constant. *Indian Antiquary*, VI, p. 45. On one occasion Prinsep took the curved figure without a spur for 300. It is obvious, however, that the several variants are intended for the same primary type, and the variations are due to copyists' peculiarities. There is no valid reason to show that the figure on the copper-plate under notice is other than what have been noticed by Prinsep and others. Dr. Bühler takes the arched figure to be the ancient Indian 4 as the initial of *sata*, a hundred, and the spur at foot the vowel-mark u. After this group of three figures, occurs the word *vaiśákha*, the name of the first month of the Indian year. The next is the syllable *di*, the initial of *divasa* a day, and it is followed by two figures, which are counterparts of the second and the third figures of the first group, and this leaves no room for any centenary value being attached to the second figure of the first group. It would be absurd to suppose that the month *Vaiśákha* included 103 days, and the idea must, therefore, be at once abandoned. The symbol must be taken as a numeral of a decimal system, and to ascertain its value the indication of the last figure is the only available guide. It is well-known that no Indian month has ever been made to comprehend more than 32 days, and, the last figure being an unavoidable and unquestionable 3, the preceding one must be 1 or 2, having the value, by its decimal position, of 10 or 20, *i. e.*, the date was either the 13th or the 23rd of the month named. To take it as a 3, as Prinsep once imagined, would be to make the month extend to 33 days, and to make two dissimilar figures do duty for the same value. In

some ancient inscriptions the figure is shown with one or two spurs in front, and the words preceding them show that, so altered, the symbol stood for 200 or 300. As it occurs without a spur in the "record under notice, it must be one, and the date must be read *Samvat 713, Vaisá- kha 13*. The year given would make the record correspond with the Christian year 771, and this would not be inconsistent with the style of the letters. The proposed value of the figure, however, if accepted to be correct, and it is difficult to get out of the inference, would necessitate at least a thorough re-examination and a possible recasting of much of what has been already written by antiquarians on the subject, particularly with reference to the origin of Indian numerals. This was, however, a large and very comprehensive question, and Dr. Mitra did not think it expedient to notice it in the course of casual remarks on a single record.

Transcript of a Copper-plate Inscription from Dacca.

- १। खस्ति ॥ जयत्यविद्याहतिहेतुभूतभ्रान्तीज्ञ(ख)संसारमहाम्बुराशि अनुत्तरावधि—
- २। ++ भगवान् मुनीन्द्रः । जयत्यशेषक्षितिपालमूलिमालामणियोतितपादपीठः ++
- ३। पादप्रणेतममाङ्गश्रीदेवखड्गो न्यपतिर्जितारिः । ++ गण्यद्यानिका तरला —
- ४। महादेवो श्रीप्रभावत्या भुज्यमानकपागकभूमहत्तरीके + दंखकाया भुज्यमा—
- ५। नककोदारवारके श्रीमित्रावल्या सामन्तवर्षियाके नवभुज्यमान कद्यव —
- ६। + रलतसके श्रीने(?)चभगेन ? भुज्यमानकद्यवपागकपरवागननादव —
- ७। — खलशत दशद्रोण वापाशिव हद्रिकाशास्त्रवर्गे नर्तकी खवपारक —
- ८। — श्रीमता श्रीसर्वान्तरेण भुज्यमानक महत्तरशिखरादिभिः छथमाण—
- ९। भागक विहारवासूदयखरोल्लवायिका उग्रवारके वन्द्यकन मतिना —
- १०। — पागकतीसनादजयदत्तकगके द्रोणिमठिकायां पागक । इ —
- ११। — पागके + दशद्रोणाधिकेषु सभुपगतविषयपती कुटुम्बिन प्रतिपा —
- १२। — तयस्तु भवता एते दशद्रोणाधिकनवपागकाय षड्गुण्डाय —
- १३। — राजराजभट्टस्यायुष्कामाय अवार्धवन्द्यसङ्गमित्रपादे का —
- १४। — दारविहारे कायतुष्टय (?) मेकद्रनौकतं तद्विषयपत्यादि —
- १५। — वितत्यमिति सम्ब ७१६ वैशाखदि १६ जयखलु —
- १६। — पुणं दस (श) दुर्गतिदुःखभयापहारिखाखण्डदातमिति —
- १७। बुद्धा भोगीश्वरैः सकल्पैः प्रतिपालनीयम् । दूत कोऽत्र परंपरैः —
- १८। — कस्मिन्तवासके परमयोगतोपासकपूरदासेन —

DR. HOERNLE remarked that he had not seen the copper-plate, but, to judge from the figures as drawn on the black-board, there appeared

to be not inconsiderable difference between the shapes of the two symbols in question. But what seemed to him of more importance was, that, even if there should be a close resemblance between them, no such conclusion as that suggested by the President could be drawn from it, because the figures on the plate, as explained by Dr. Mitra, evidently belonged to the decimal system of notation, whereas the symbol which hitherto has been accepted by all archæologists as signifying 100, belonged to an entirely different system. Moreover the latter had been principally observed in use in Western India, while the present plate was from the extreme East, and it did not follow that an apparently similar numeral figure used in both places necessarily possessed the same signification. He did not, therefore, think the evidence now put before them was sufficient to discredit the theory at present generally accepted.

DR. MITRA replied that he did not then mean to contest Prinsep's and Dr. Bühler's reading of the symbol, but he brought to notice the fact that their reading was inadmissible in the present case, and if the present reading be right, considerable changes will have to be made in all former readings.

THE HON. J. GIBBS, C. S. I. exhibited a 100 gold-mohur piece of the Emperor Aurangzib, which had been sent for that purpose by H. H. Maharajah Scindia (see Plate III), and said

I have the pleasure of exhibiting to the Society a 100 gold-mohur piece of the Emperor Aurangzib which I am enabled to do through the kindness of H. H. the Maharajah Scindiah, to whom it belongs.

It is the piece I mentioned in my note in the Proceedings of this Society for July 1883, and of which I subsequently gave a plaster cast taken from a paper impression.

The coin was in the possession of a well-known banker at Benares who presented it to its present owner. I have been for some years trying to trace it, and only about six weeks ago heard accidentally from a native friend who was calling on me, what had become of it. I at once wrote to Col. Bannerman, the Political Resident at the Maharajah's Court, and he kindly procured it from the Durbar to enable the Society to have the opportunity of seeing so curious a piece, and I think we should not fail to communicate our thanks to H. H. the Maharajah Scindiah for the treat he has afforded us.

The coin is 4 inches in diameter and $\frac{1}{4}$ in. in thickness, and its weight is 35 oz. 4 dwts. The inscription is as follows :

Obverse.

Square centre. Núr-ud-dín Abul Zafar Muhammad Aurangzib
Alamgir Bahádur Bádsháh Ghází, 1083, A. H.

Margin. He from the hand of whose generosity the clouds receive water. The world-conquering king, the sea of generosity, Aurangzib. The face of gold becomes resplendent like the faces of the moon and sun, from the light of his coin in the vast plain of Hindústán.

Reverse.

Square centre. Struck in the auspicious year of accession 15, in the home of the Kalifat Sháh—Jehánábád.

Margin. The emperor Aurangzib, conqueror of the world as powerful as Heaven, as wise as fate. The face of gold from the light of his coin became resplendent like the shining sun.

The PHILOLOGICAL SECRETARY exhibited ten coins forwarded by Mr. Rivett-Carnac, and read the following extract from his letter accompanying the coins :

"I send for the inspection of the Society some coins obtained from the Panjáb which appear to me to be of rare, if not unknown, types. Ten coins (among them) are thick and lumpy. The metal would seem to be a mixture of copper and silver. On one side representations of a figure—very rough—on the other a Bull or Elephant. Traces of letters are to be found on both sides."

DR. HOERNLE remarked that he did not recognize the coins, nor had he been able to make anything of the so-called letters on them. But what had struck him was a curious resemblance between these coins and the square piece of silver which had been sent some time ago by Col. Clerk and exhibited at a previous meeting of the Society (see *Proc.* for August 1884, page 128). That piece had met with general suspicion as to its being a genuine coin ; and it was probable that the pieces of metal now before them were of the same character. In connection with this subject, Dr. Hoernle added, he might mention to the meeting, that he had seen a letter from Col. Clerk, dated 9th February last, in which he communicated to the Society, that the letters on the oblong piece of silver, which had been recognized by Mr. Beames and Col. Prideaux to be some form of Semitic (see *Proc.* for January 1885 pp. 2 and 3) were declared by Mr. Thompson of the British Museum to be Sclavonic. He read them as follows, commencing at the further end from the ram's head : *th, n*, the sign *sofr, b, kh*.

The HON. MR. GIBBS remarked about the coins now exhibited that he suspected they were spurious, and had been manufactured by persons at Rawal Pindi, who, as he had mentioned on a former occasion, made it a business to manufacture spurious relics and antiquities.

The following papers were read :

1. *On the Kings of the Suffarian dynasty of Nimroz or Sigistan*.—By COL. H. G. RAVERTY.

(Abstract.)

In this paper, Colonel Raverty refers to a Note on "Some Coins from Candahar" by Mr. J. C. Rodgers, published in the April No. of the Society's *Proceedings* and considers the theory therein propounded by Mr. Rodgers as an erroneous one to go upon. This he shows by a reference to his (Colonel Raverty's) translation of the *Ṭabaqát i Násirí* in which, he says, will not only be found an account of the ten last rulers of Nimroz or Sigistan but also of the preceding eight, besides other information respecting the Suffarian dynasty. Colonel Raverty then gives a list of these eighteen kings, the years of their reign and the relationship existing between them; and concludes by explaining how Mangú Khán came to put the Kalimah on his coins.

The paper will be published in Journal, Part I for 1885.

2. *Notes on Indian Rhynchota ; No. 2, Homoptera*.—By E. F. T. ATKINSON, Esq., M. A., C. S.

(Abstract.)

This paper is a further instalment of the author's notes on *Rhynchota*, of which the first was printed in abstract in the *Proceedings* for December last. The present list comprises 45 species distributed as follows amongst the following genera: *Cosmocarta* 19, *Phymatostetha* 11, *Callitettix* 3, *Ptyelus* 5, *Aphrophora* 1, *Cloria* 2, *Carystus* 1 and *Machærota* 3. In addition to the above, 10 apparently new species of the genera *Phymatostetha* and *Cosmocarta*, contained in the collection of the Indian Museum, will be described in a separate paper hereafter.

The paper will be published in Journal, Part II for 1885.

3. *Note on the Trishtubh Metre of the Rig Veda and its likeness to some classical metres*.—By J. BOXWELL, Esq., C. S.

(Abstract.)

In Mr. Boxwell's opinion, the Vedic Trishtubh or the earliest of Hendecasyllabic metres yields, on analysis, interesting results and discloses curious affinities to others of the same group. For the purpose of scansion he would divide the Trishtubh into an initial and final quadrisyllable and a medial trysyllable, and shows that the typical trishtubh is thus seen to be $\times - \cup - | - || \cup \cup | - \cup - \times ||$ or a combination of Alcaic opening with Sapphic close, a line of great

sweetness and dignity. He gives several instances from the Rig Veda and appears inclined to think that both Shakespere's iambics and Dante's heroics contain many veritable trishtubhs. He concludes by giving a translation into Latin of two fine odes from the 3rd and 10th books of the Rig Veda, one into Sapphics, the other into its native metre in a latin dress.

The paper will be published in Journal, Part I for 1885.

4. *Description of some new Indian Rhopalocera.*—By LIONEL DE NICEVILLE.

The paper will be published in Journal, for Part II of 1885.

LIBRARY.

The following additions have been made to the Library since the Meeting held in February last.

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presented by the respective Societies and Editors.

Baltimore. Johns Hopkins University,—American Chemical Journal, Vol. VI, No. 5, December, 1884.

———. Circulars,—Vol. IV, No. 36, January, 1885.

Bombay. Indian Antiquary,—Vol. XIV, No. 167, February, 1885.

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———. Ungarische Revue,—Nos. 4—10, 1883; 1—7, 1884.

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Calcutta. Geological Survey of India,—Memoirs, Palæontologia Indica, Series XIV, Vol. I, Part 3, Fasc. 4; Series X, Vol. III, Part 5.

———. Records, Vol. XVIII, Part 1.

———. Original Meteorological Observations, June to August, 1884.

Frankfurt. Senckenbergische Naturforschende Gesellschaft,—Bericht, 1883-84.

The Hague. Koninklijk Instituut voor de Taal-Land en Volkenkunde van Nederlandsch-Indië,—Bijdragen, Vol. X, No. 1.

- Havre. Société de Géographie Commerciale,—Bulletin, No. 2, November, 1884.
- Helsingfors. Societatis Scientiarum Fennicæ,—Acta, Vol. XIII.
- . Öfnersigt, Förhandlingar, Vol. XXV, 1882-83.
- Leipzig. Deutsche Morgenländische Gesellschaft,—Zeitschrift, Vol. XXXVIII, No. 4.
- Lahore. Anjuman-i-Punjab,—Journal (English Section), Vol. V, Nos. 5-8.
- London. Academy,—Nos. 663-666.
- . Athenæum,—Nos. 2986-2989.
- . Nature.—Vol. XXXI, Nos. 794-797.
- . Royal Astronomical Society,—Monthly Notices, Vol. XLV, No. 1, November, 1884.
- . Royal Geographical Society,—Proceedings, Vol. VI, No. 12, December, 1884.
- . Royal Microscopical Society,—Journal, Vol. IV, (2 series), No. 6, June, 1884.
- Paris. Société de Géographie,—Compte Rendu des Séances, Nos. 1 and 2, 1885.
- Philadelphia. Academy of Natural Sciences,—Journal, Vol. IX, (2nd series), Part 1.
- . American Philosophical Society,—Proceedings, Vol. XXI, No. 115.
- Rio de Janeiro. Escola de Minas,—Annaes, No. 3, 1884.
- Vienna. Ornithologischer Verein,—Mittheilungen, Vols. VIII, Nos. 8-12; IX, No. 1.
- Washington. Annual Report of the Board of Regents of the Smithsonian Institution, 1882.
- . Annual Report of the Commissioner of Agriculture, 1883.
- Zagreb. Arkeologickoga Druztva,—Viestnik, Vol. VII, No. 1.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

- BALL, V. On the Identification of the Animals and Plants of India, which were known to early Greek Authors. 8vo. Dublin, 1885.
- DAS, BROJENDROLAL. Asiatic Researches,—Popular edition, Vol. II, No. 5. 8vo. Calcutta, 1885.
- ROY, PROTAB CHANDRA. The Mahābhārata, translated into English Prose. Part XIV. 8vo. Calcutta, 1885.
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MISCELLANEOUS PRESENTATIONS.

Rules and Objects of the Central Mahomedan Association. 8vo. Calcutta, 1885.

THE HON. AMIR ALI.

Indian Forests, Vol. XI, No. 1, January, 1885. 8vo. Roorkee, 1885.

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Catalogue of the Library of the Geological Survey of India.

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Excursions et Reconnaissances. Part VIII. A Collection of official and other papers on French Cochin China. 8vo. Saigon, 1884.

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Report on the Administration of the N. W. Provinces and Oudh for the year ending 31st March, 1884. Fcp. Allahabad, 1885.

GOVERNMENT, NORTH WESTERN PROVINCES.

Report of the Select Committee on East India Railway Communications. Fcp. London, 1884.

INDIA OFFICE, RECORD DEPARTMENT.

Maryland's Influence upon the Land Cessions to the United States, by H. B. Adams, Ph. D. 8vo. Baltimore, 1885.

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Mineral Resources of the United States by Albert Williams, Jr. 8vo. Washington, 1883.

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Notice Historique sur l' Université de Bruxelles. 8vo. Bruxelles, 1884.

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London. Chemical News,—Vol. LI, Nos. 1312—1315.

———. Entomologist,—Vol. XVII, No. 259, December, 1884.

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———. Journal of Science,—Vol. VI, (3rd Series), No. 132, December, 1884.

———. Messenger of Mathematics. Vol. XIV, No. 6, October, 1884.

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New Haven. American Journal of Science,—Vol. XXVIII, No. 168, December, 1884.

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———. Revue de Linguistique,—Vol. XVII, No. 4.

———. Revue Scientifique,—Vols. XXXIII, Nos. 24—36; XXXIV, Nos. 1—26.

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CANDOLLE, A. DE. Origin of Cultivated Plants. 8vo. London, 1884.

DASS, BROJENDROLAL. Asiatic Researches. Popular Edition Vol 2, No. 5. 8vo. Calcutta, 1885.

ELLIOT, SIR H. M. History of India, Vols. II—III. 8vo. London, 1869-1871.

GOULD, JOHN. Birds of New Guinea, Part, XVIII. Fol. London, 1884.

International Fisheries Exhibition, London, 1883. The Fisheries Exhibition Literature, Vol. XIII. Official Records and Statistical Tables. 8vo. London, 1884.

———. Vol. XIV, Analytical Index. 8vo. London, 1884.

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TEMPLE, CAPTAIN R. C. Legends of the Punjab, Vol. II, Part 18. 8vo. Bombay, 1885.



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR APRIL, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 1st April, 1885, at 9.15 P. M.

D. WALDIE, ESQ., F. C. S., in the Chair.

The minutes of the last meeting were read and confirmed.

Fifteen presentations were announced, as mentioned in the appended Library List.

The following gentlemen proposed and seconded at the last meeting were ballotted for and elected Ordinary Members :

1. Kumar Sarat Chunder Singh.
2. J. W. Chambers, Esq.
3. Babu Yadunath Sen.
4. Babu Yagendranath Mallick.
5. H. Martyn Clark, Esq.
6. Babu Narendranath Sen.
7. Maulavi Syad Mahdi Ali Nawaz Jung Bahadur.

The following gentlemen are candidates for election at the next meeting :—

1. Monsieur Ivan Verdeau, proposed by Babu Pratapachandra Ghosha, seconded by Babu Kedarnath Dutt.
2. Hon. Kumar Baikuntonath De, proposed by Dr. Rajendralala Mitra, seconded by F. E. Pargiter, Esq.

The following gentlemen have intimated their wish to withdraw from the Society :

Rev. K. M. Banerji.

Col. E. C. Macnair.

Mr. Staley who was elected at the meeting in January has declined the membership.

The CHAIRMAN announced that, in accordance with Rules 37 and 38 of the Society's Bye Laws, the names of the following gentlemen had been posted up as defaulting members since the last monthly General Meeting and would now be removed from the list of Members, and the fact published in the Proceedings :

Mr. J. Low.

Lt.-Col. J. G. Forbes.

The CHAIRMAN reported that the Council had appointed Mr. H. F. Blanford a Trustee of the Indian Museum, on behalf of the Society, in the place of Major J. Waterhouse, who had been elected a Trustee on behalf of the Museum.

The CHAIRMAN reported, for the approval of the meeting, that the Council had appointed the Hon'ble H. J. Reynolds a Vice-President of the Society in the place of the Hon'ble J. Gibbs who had left India; and Mr. A. Simson a member of Council in Mr. Reynolds' place.

Approved unanimously.

Read the following letter from Mr. F. Moore :

With reference to your query anent the continuation of the "Description of *Lepidoptera* collected by Atkinson" all I can at present say is, that I have obtained from Dr. Standingen of Dresden (to whom the collection belongs) the whole of the remaining portions of the moths, contained in 8 boxes closely packed, comprising the *Pyrallidæ*, *Geometridæ*, *Tortricidæ*, and *Tineidæ*. I have worked up most of the named species, but I doubt much whether I shall be able to complete the work before next year.

The following papers were read—

1. *The Square Silver coins of the Sultans of Kashmir.*—By CHARLES J. RODGERS, Principal, Normal College, Amritsar.

(Abstract.)

This paper is a long and interesting account of the square silver coins of Kashmir and of the sovereigns in whose reigns they were struck. It gives a description of 40 coins, beginning with those of Shams-ud-din dated A. H. 715 down to those of Yakub Shah dated A. H. 992. There are also a few coins struck by Akbar before he had conquered the province and after the conquest of the country.

This paper, with three plates, will be published in the Journal, Part I.

2. *Zoological Notes from H. M.'s Indian Marine Survey Steamer. "Investigator," Commander Alfred Carpenter, R. N., Commanding. No. 1, —On the Structure and habits of Cyrtophium calamicola, a new tubicolous Amphipod from the Bay of Bengal.—By G. M. GILES, M. B., Surgeon Naturalist.*

This paper is a description of a new Amphipod Crustacean commonly taken in the surface net about the Palmyra shoal and mouth of the Dhamra river on the Orissa coast. It comes under notice as a body moving with tolerable activity, in appearance like a morsel of drift wood. On closer examination, the four antennae of a minute Crustacean are seen to protrude from one end; they are the locomotor organs of the creature and serve to propel it through the water. A still closer examination shewed the amphipod to belong to the Subdivision *Domicola*, Family *Caroppiidae*, Genus *Cyrtophium*.

The tube, inhabited by this little creature, is considerably longer than the body it shelters, and is of a deep golden brown, irregularly banded by zones of darker and lighter tint, varying from a fine golden yellow through a warm brown to black. These tubes vary in size from 5 to 10 millimetres long by 0.5 to 1 millimetre wide, and are nearly cylindrical. The material consists of coarse and nearly opaque fibres, shewing no structure and presenting the appearance of a hardened secretion. The author goes on to give a very interesting account of the habits of this amphipod, the manner in which it repairs its dwelling and the material of which the dwelling is composed.

The paper, which is illustrated by an admirable plate, will be published in full in the Journal, Part II, of 1885.

3. *Fourth List of Butterflies taken in Sikkim in October 1884.—By L. DE NICEVILLE.*

(Abstract.)

In this paper 29 new species of *Rhopalocera* taken in the neighbourhood of Darjeeling in the month of October are enumerated, bringing up the total number recorded to 313. With a few exceptions, they were all taken at low elevations, principally on the road leading to the Rungit Valley.

This paper will be published in the Journal, Part II.

The following paper has been received and will be read at the next meeting—

Observations of the Solar Thermometer at Lucknow.—By S. A. HILL, B. S. C., A. R. S. M., Meteorological Reporter for the North-West Provinces and Oudh.

LIBRARY.

The following additions have been made to the Library since the Meeting held in March last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

- Amsterdam. Koninklijk Zoologisch Genootschap natura Artis Magistra,—Bijdragentot de Dierkunde, Part II, No. 11.
- Baltimore. Johns Hopkins University,—American Journal of Mathematics, Vol. VII, No. 2, January, 1885.
- Bombay. Indian Antiquary,—Vol. XIV, Part 168, March, 1885.
- . Royal Asiatic Society (Bombay Branch),—Journal, Vol. XVII, No. 44.
- Bruxelles. Musée Royal d' Histoire Naturelle,—Bulletin, Vol. III, No. 2.
- Buenos Aires. Academia Nacional de Ciencias,—Boletin, Vol. VII, Nos. 1 and 2.
- Calcutta. Original Meteorological Observations,—September and October, 1884.
- Chicago. American Antiquarian and Oriental Journal,—Vol. VII, No. 1, January, 1885.
- Copenhagen. K. Nordiske Oldskrift-Selskab,—Aarboger, No. 4, 1884.
- Edinburgh. Royal Physical Society,—Proceedings, Vol. VIII, Part I, 1883-84.
- Genoa. Museo Civico di Storia Naturale,—Annali, Vols. XVIII—XXI.
- Lahore. Anjuman-i-Punjab,—Journal, Vol. V, Nos. 9—12.
- Liège. Société Géologique,—Annales, Vol. XI.
- London. Academy,—Nos. 667—670.
- . Athenæum,—Nos. 2990—2993.
- . Institution of Mechanical Engineers,—Proceedings, No. 4, November, 1884.
- . Nature, Vol. XXXI, Nos. 798—801.
- . Royal Asiatic Society,—Journal, Vol. XVII, Part 1, January, 1885.
- . Royal Astronomical Society,—Monthly Notices, Vol. XLV, No. 2, December, 1884.

London. Royal Geographical Society,—Proceedings, Vol. VII, Nos. 1 and 2, January and February, 1885.

———. Royal Society,—Proceedings, Vol. XXXVII, No. 233.

———. Statistical Society,—Journal, Vol. XLVII, Part 4, December, 1884.

New Haven. Connecticut Academy of Arts and Sciences,—Transactions, Vol. VI, Part 1.

Paris. Société de Géographie,—Compte Rendu des Séances, Nos. 3 and 4, 1885.

———. Société Zoologique,—Bulletin, Vol. IX, No. 6.

Rome. Società degli Spettroscopisti Italiani,—Memorie, Vol. XIII, Nos. 11 and 12, November and December, 1884.

St. Petersburg. L' Académie Impériale des Sciences,—Bulletin, Vol. XXIX, Nos 2 and 3.

———. ————. Mémoires, Vol. XXX, No. 4; Vol. XXXII, Nos. 4—12.

Vienna. K. K. Geologische Reichsanstalt,—Die Gasteropoden, Vol. XXII, No. 4.

———. ————. Jahrbuch, Vol. XXXIV, No. 4.

———. ————. Verhandlungen,—Nos. 13—18, 1814.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

DUPONT, E. *La Chronologie Géologique*. 8vo. Brussels, 1884.

SINGHA, KAILAS CHANDRA. *Shena Rajgan*. 8vo. Calcutta, 1884.

MISCELLANEOUS PRESENTATIONS.

Cholera in India, 1862 to 1881. Fcp. Calcutta, 1884.

General Report on Public Instruction in Bengal for 1883-84. Fcp. Calcutta, 1884.

Indian Forester, Vol. XI, Nos. 2 and 3, February and March, 1885. 8vo. Roorkee, 1885.

BENGAL GOVERNMENT.

Notes on Aryan and Dravidian Philology, Vol. I, Part I, by M. Seshagiri Sastri, M. A. 8vo. Madras, 1884.

CHRISTIAN KNOWLEDGE SOCIETY, MADRAS.

The Lepidoptera of Ceylon, Part 10, by F. Moore, F. Z. S. 4to. London, 1885.

COLONIAL SECRETARY, COLOMBO.

Debrett's Baronetage for 1883. 8vo. London, 1885.

Debrett's Peerage for 1883. 8vo. London, 1883.

THE HON. J. GIBBS.

Journal of the Health Society for Calcutta, Vol. I, Part I, 8vo. Calcutta, 1885.

HEALTH SOCIETY, CALCUTTA.

Commentaries of Alfonso Dalboquerque, translated by W. de Gray Birch. Vol. IV, (Hakluyt Society) 8vo. London, 1884.

Index to Alvarez' Narrative of the Portuguese Embassy to Abyssinia, by Lord Stanley of Alderley. 8vo. London, 1884.

HOME DEPARTMENT.

Hand List of Mollusca, Part II, Gasteropoda, by Geoffrey Nevill, C. M. Z. S. 8vo. Calcutta, 1884.

INDIAN MUSEUM.

International Meteorological Observations, December, 1883. 4to. Washington, 1885.

Monthly Weather Review, December, 1884, 4to. Washington, 1885.

METEOR. REPORTER TO THE GOVERNMENT OF INDIA.

Gazetteers of the following Districts in the Punjab, viz.,—Gurgaon, Karnal, Hisar, Ambala, Hoshiarpur, Kangra, Vols. I—II, Gurdaspur, Sialkot, Lahore, Gujranwala, Ferozepore, Rawalpindi, Dera Ismail Khan and Hazara. 8vo. Lahore, 1883-84.

Report on the Sanitary Administration of the Punjab for 1883. Fcp. Lahore, 1884.

Report on Vaccination in the Punjab for 1883-84. Fcp. Lahore, 1885.

PUNJAB GOVERNMENT.

Zoological Record, Vol. XX for 1883. 8vo. London, 1884.

ZOOLOGICAL RECORD ASSOCIATION, LONDON.

PERIODICALS PURCHASED.

Allahabad. Punjab Notes and Queries,—Vol. II, No. 18, March, 1885.

Berlin. Deutsche Litteraturzeitung,—Vol. V, Nos. 51 and 52; Vol. VI, Nos. 1—5.

———. Journal für die reine und angewandte Mathematik,—Vol. XCVIII, No. 1.

Calcutta. Indian Medical Gazette,—Vol. XX, No. 3, March, 1885.

Cassel. Botanisches Centralblatt,—Vol. XX, No. 13; Vol. XXI, Nos. 1 and 2.

Edinburgh. The Edinburgh Review,—Vol. CLXI, No. 379, January, 1885.

Göttingen. Gelehrte Anzeigen,—Nos. 1 and 2.

Leipzig. Annalen der Physik und Chemie,—Vol. XXIV, No. 2.

———. ————. Beiblätter, Vol. IX. No. 2.

———. Hesperos,—Vol. IV, Nos. 88—90.

———. Literarisches Centralblatt,—No. 52, 1884; Nos. 1—6, 1885.

- London. *Annals and Magazine of Natural History*,—Vol. XV (5th series), No. 86, February, 1885.
- . *Chemical News*,—Vol. LI, Nos. 1316—1319.
- . *Entomologist*,—Vol. XVIII, Nos. 260 and 261, January and February, 1885.
- . *Entomologist's Monthly Magazine*,—Vol. XXI, Nos. 1248 and * 1249, January and February, 1885.
- . *Ibis*,—Vol. III, (5th series), No. 9, January, 1885.
- . *Journal of Botany*,—Vol. XXIII, Nos. 265 and 266, January and February, 1885.
- . *Journal of Science*,—Vol. VII, (3rd series), Nos. 133 and 134, January and February, 1885.
- . *London, Edinburgh and Dublin Philosophical Magazine*,—Vol. XIX (5th series), Nos. 116 and 117, January and February, 1885.
- . *Messenger of Mathematics*,—Vol. XIV, Nos. 7 and 8, November and December, 1884.
- . *Mind*,—No. XXXVII, January, 1885.
- . *Nineteenth Century*,—Vol. XVII, Nos. 95 and 96, January and February, 1885.
- . *Publishers' Circular*,—Vol. XLVIII, Nos. 1138 and 1139.
- . *Quarterly Journal of Microscopical Science*,—Vol. XXV, No. 79, January, 1885.
- . *Society of Arts, Journal*, Vol. XXXIII, Nos. 1682—1685.
- . *Westminster Review*,—Vol. LXVII, No. 133, January, 1885.
- New Haven. *American Journal of Science*,—Vol. XXIX, No. 169, January, 1885.
- Paris. *Académie des Sciences, Compte Rendu des Séances*, Vol. XCIX, No. 26; Vol. C, Nos. 1—4.
- . *Annales de Chimie et de Physique*,—Vol. III, (6th series), December, 1884; Vol. IV, (6th series), January, 1885.
- . *Journal des Savants*,—December, 1884.
- . *Revue des Deux Mondes*, Vol. LXVII, Nos. 1—3.
- . *Revue Critique*,—Vol. XVIII, No. 52; Vol. XIX, Nos. 1—4.
- . *Revue Scientifique*,—Vol. XXXV, Nos. 1—5.
- Vienna. *Orientalische Museum, Oesterreichische Monatsschrift für den Orient*, Vol. XI, No. 2.

BOOKS PURCHASED.

- FALLON, S. W. *Dictionary of Hindustani Proverbs*. 8vo. Benares, 1885.
- TEMPLE, CAPTN. R. C. *The Legends of the Punjab*, Vol. II, No. 19. 8vo. Bombay, 1885.

THOMSON, SIR WILLIAM. Lectures on Molecular Dynamics. 4to. Baltimore, 1884.

THORBURN, MAJOR W. STEWART. A Guide to the Coins of Great Britain and Ireland. 8vo. London, 1885.



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR MAY, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 6th May, 1885, at 9.15 P. M.

D. WALDIE, Esq., F. C. S. in the Chair.

The minutes of the last meeting were read and confirmed.

Seventeen presentations were announced, as mentioned in the appended Library List.

The following gentlemen, proposed and seconded at the last meeting, were balloted for and elected Ordinary Members :

1. Monsieur Ivan Verdeau.
2. Hon. Kumar Baikuntanath Dé.

The following gentleman is a candidate for election at the next meeting :—

Mahomed Naemullah, Deputy Magistrate of Bulundshahr, proposed by Major J. Waterhouse, seconded by Dr. R. L. Mitra.

The following gentlemen have intimated their wish to withdraw from the Society :

1. Mr. E. V. Westmacott.
2. Mr. W. R. H. Merk.
3. Maulavi Fatch Ali.

The following letters were read :

1. From Mr. J. W. Chambers forwarding two volumes of Storm Pamphlets collected by the late Henry Piddington, and requesting the Society's acceptance of them for the Library.

2. From Secretary to Government, N. W. Provinces and Oudh, forwarding a parcel containing 204 coins found in the Fatehgarh district.

The PHILOLOGICAL SECRETARY reported that these were all coins of Maizz-ud-din Muhammad ben Sam, who conquered India, and that they were all struck in India. *Obverse*: Horseman with an indistinct Persian inscription, probably *ماہماد* Mahommad. *Reverse*: Bull with a Hindi inscription श्रीमहमद साम Shri Muhammad Sami. Their date is about 1192 A. D. They are described by Thomas in his Pathan kings of Delhi, p. 16. They are very common and of no particular value. The Society is amply provided and the coins are available for purchase.

The PRESIDENT reported that the Council had sanctioned the publication of the following works in the Bibliotheca Indica, viz. :—

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|--|--------------------------------|
| 1. Jnata Dharma Sutra. | } to be edited by Dr. Hoernle. |
| 2. Upasaka Dasa Sutra. | |
| 3. Bipaka Sutra. | |
| 4. Saddharma Pundarika. | |
| 5. Ashtasahasrika, to be edited by Dr. Mitra. | |
| 6. Kurma Purana, to be edited by Pundit Nilmony Mukerji. | |
| 7. Varaha Purana, by Pundit Hrishikes Sastri. | |

The PRESIDENT further reported that Major Waterhouse had been appointed General Secretary temporarily during the absence of Mr. Fargiter; and that Mr. J. Beames had been elected a Member of Council, and had consented to act as Philological Secretary during the absence of Dr. Hoernle.

Also that Mr. E. F. T. Atkinson had been appointed Auditor for the Annual Accounts of 1884, in place of Mr. Westland.

The NATURAL HISTORY SECRETARY (Mr. WOOD-MASON) exhibited specimens of two species of *Nephropsis*, a blind genus of Macrurous Crustacea belonging to the family *Homaridae*, and made the following remarks :—

The members of the Society will be glad to hear that the Government has commenced to fulfil its promise, made to this Society many years ago, to carry out a systematic exploration of the depths of the Indian Seas in connexion with a contemplated survey of the Coasts, and that during the past season some deep-sea dredging has been done on board H. M.'s Indian Marine Survey Steamer 'Investigator.' During the earlier part of the season, dredging was carried out at two stations on opposite sides of the Bay of Bengal—off Kyouk Phyoo in 272

fathoms, and off False Point in 202 fathoms, and from these moderate depths interesting collections of objects, consisting chiefly of Fishes and Crustaceans, were brought up in the trawl. These collections were made over to me in March last by Dr. Giles, the Naturalist to the Survey, for determination and description. They include several characteristic genera of deep sea animals, *e. g.*, *Macrurus*, amongst Fishes, and *Nephropsis*, *Rhacocaris*, *Orophorhynchus*, *Munidopsis*, etc., amongst Crustaceans, and several novelties, notably three remarkable fishes belonging to the Eels. Later in the season, after the vessel had been refitted at Calcutta, "the Swatch of no ground" was explored, and, from depths ranging from 285 to 409 fathoms, most interesting collections of animals were brought up consisting of similar types of Fishes and Crustaceans, with the addition of a few Mollusks, amongst which may be mentioned a very large *Nucula* marked with close-set V-shaped ridges as in the Japanese *Nucula mirabilis*, and more novelties. The physical characters of the sea-bed, which is described by Dr. Giles as a green ooze with dead pteropod shells abundantly disseminated through it, the temperature of the water at the greatest depth reached by the dredge, which is stated to have been 47° Fahr., and the occurrence of a characteristic deep sea fauna, in the depths of the Swatch prove that this depression of the seabed, which is chiefly remarkable on account of its close proximity to the shoals at the mouths of the Ganges and Brahmaputra, is, as was long ago suggested by Sir Charles Lyell, a part of the original basin of the Bay of Bengal.

I exhibit specimens of the *Nephropsis* obtained at the three stations above-mentioned; from Station No. 1, Lat. 20° 17' 30" N., Long. 88° 50' E., off False Point, a large series of both sexes was obtained in 202 fathoms with a bottom temp. of 52° F.; from Station No. 2 in Lat. 19° 35' N., Long. 92° 24' E., off Kyook Phyoo, on the opposite side of the Bay, a single one was fished up from 272 fathoms with a bottom temperature of 50° Fahr.; and from Station No. 3, in the Swatch, in Lat. 20° 49' N., Long. 89° 8' E., one male from 409 fathoms with a temperature of 47° Fahr.

All the specimens from Stations 1 and 2 are of the same species; they differ in colour (which is old ivory-white with orange red markings), in the consistence of the integument of the branchiostegal portions of the carapace in the female (which are soft and papery), in the form and proportions of the rostrum (which is shorter and lanceolate at the extremity), and in other respects from the one obtained at Station No. 3, which is without doubt the male of the species (*N. Stewarti*) dredged by me at about the same depth in the Andaman Sea in 1872, agreeing therewith in the firmly chitinated integument of the carapace in both sexes, in the form of the cervical

suture, of the median thoracic portion of the cephalothorax, and of the rostrum, which gradually tapers to a longer point, and in colour, which is throughout a brilliant scarlet-lake. I propose to call the new species clothed in a white uniform with red facings, *N. carpenteri*, after the commander of the vessel.

Full comparative descriptions of the two species, together with an account of the structure of the respiratory organs and of the larvae, which leave the huge egg, in a condition closely resembling fig. E. of S. I. Smith's plate representing the early stages of the American lobster, will be published with illustrations in the Journal.

In reply to a question by Mr. Cotes, the speaker explained that no trace of the outer remus of the thoracic limbs was preserved in the adults.

The following papers were read—

1. *Observations of the Solar Thermometer at Lucknow.*—By S. A. HILL, B. Sc., A. R. S. M., *Meteorological Reporter for the N. W. Provinces and Oudh.* (Postponed from last Meeting.)

(Abstract.)

This paper has been compiled with a view to test the soundness of the conclusions arrived at by the author from a discussion of seven years' observations at Allahabad, published in the Journal, Vol. LI, Part II.

The data on which the paper is founded are hourly observations of a non-registering black-bulb thermometer *in vacuo*. These observations were made on four days in each month during the eight years 1877-84, but only such as were recorded at times when the sky was free or nearly free from cloud have been made use of. The reductions have been effected by means of Ponillet's formula.

The deduced mean values of the constant of solar radiation in degrees of the thermometer employed are the following :—

Year.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.
<i>Solar Const.</i>	80.1	86.7	80.4	76.7	74.7	74.6	76.4	77.2

These results strongly support the conclusion derived from the Allahabad observations that the solar radiation is most intense when there are fewest spots on the sun's surface, the last sunspot minimum having occurred in 1878 and the maximum probably in 1881 or 1882.

The author then proceeds to show that though there is a rather strong presumption in favour of the variation in the sun's heat indicated by the figures above given, the range indicated is doubtless much too great. The thermometer having a globular bulb receives radiation from all sides; and therefore in dry weather, when the ground under it is bare and the air over it dusty, it receives much more reflected heat than

* when the ground is grassy and the air clear. The great excess of observed radiation in 1878 over any other year in the series is probably for the most part due to the dryness of that year. The question can only be satisfactorily solved by continuous records of some form of actinometer designed to receive parallel rays.

As regards atmospheric absorption the conclusions of the previous paper are generally confirmed, but the diathermancy of dry air is shown to be probably not quite so great as was supposed.

The paper will be printed in the Journal, Part II.

2. *Notes on Japanese Land and Fresh Water Mollusca.*—By O. F. VON MOLLENDORF, PH. D. Communicated by the NATURAL HISTORY SECRETARY.

(Abstract.)

These notes are based chiefly upon a collection formed during the year 1884 by Dr. J. Anderson, F. R. S., and forwarded by him for classification to Dr. Hungerford and the author, who takes the opportunity to publish descriptions of some new species formerly discovered by Messrs. Hungerford and Eastlake, and to make some correction in his former paper on Japanese *Clausiliae* published in the Journal of this Society for 1882.

The paper contains notices of 42 species, of which 1 *Nanina*, 2 *Bulimini*, 3 *Clausiliae*, and 1 *Diplommatina* are considered to be new to science. It will be published in the Journal, Part II, No. 1 for the current year.

3. *Illustrations of local architecture in the Fatehpur District, N. W. P.*—By F. S. GROWSE, M. A., C. I. E.

(Abstract.)

The district was rich in temples of the same style as those in Bundelkhand in the century preceding the Muhammadan conquest. Those built of stone have mostly been destroyed, and fragments of their ruins may be seen lying about the caves or built into the walls of colleges. Two temples of brick are still standing. The larger of these at a place called Tinduli has recently been repaired out of a grant made by Government at the instance of the writer. The other is susceptible of repair at slight expense.

There is also a large building in the town of Khajuraho consisting of a large walled garden known as the Badshahi Bagh, a masonry tank, and a fortified Sarái. It was erected by the Emperor Aurangzeb in 1659 to commemorate his victory over his brother Shuja'a in a battle fought in the neighbourhood. The works, of which a full description is given, are on a very grand scale, but the execution seems to have been hasty, and there is not much delicacy in the details.

The paper concludes with some remarks on the number of Hindu temples in the district and their architectural style. It will be published in the Journal, Part I for 1885.

4. *Natural History Zoological Notes from H. M.'s Indian Marine Survey Steamer "Investigator," Commander Alfred Carpenter, R. N., Commanding.*—No. 2. *Description of a New Species of the Amphipod Genus Melita from the Bay of Bengal.*—By G. M. GILES, M. B., F. R. C. S., *Naturalist to the Indian Marine Survey*.

(Abstract.)

This paper contains a detailed description of a small Amphipodous Crustacean, only about 5 or 6 millims. in length, of which two specimens were obtained by the author by means of the hempen triangles from a depth of $12\frac{1}{2}$ fathoms near the Mutlah Light Ship off the mouths of the Ganges and Brahmaputra.

The paper, which is illustrated by a highly magnified coloured drawing of the animal, as well as by figures of some of its parts on a much larger scale, will be published in the Journal, Part II, No. 2 for the current year.

The following paper has been received :—

Natural History Notes from H. M.'s Indian Marine Survey Steamer "Investigator," Commander Alfred Carpenter, R. N., Commanding.—No. 3. *On the Prothallus of Padina pavonia.*—By G. M. GILES, M. B., F. R. C. S., *Naturalist to the Indian Marine Survey*.

LIBRARY.

The following additions have been made to the Library since the Meeting held in April last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Baltimore. American Oriental Society,—Proceedings, October, 1884.

———. Johns Hopkins University,—American Chemical Journal, Vol. VI, No. 6.

———. ———. American Journal of Philology, Vol. V, No. 4.

———. ———. Circulars, Vol. IV, Nos. 37 and 38.

Batavia. Bataviaasch Genootschap van Kunsten en Wetenschappen, —Notulen, Vol. XXII, No. 4.

———. Natuurkundig Tijdschrift voor Nederlandsch-Indië,—Vol. XLIV.

- Bombay. Bombay Branch of the Royal Asiatic Society,—Journal, Vol. XVII, No. 44.
- . Indian Antiquary,—Vol. XIII, Nos. 164 and 165, December 1884, and Supplement; Vol. XIV, Nos. 169 and 170, April and May 1885.
- Bordeaux. Société de Géographie Commerciale,—Bulletin, No. 6, 1885.
- Brussels. Société Entomologique,—Annales, Vols. I—XXVII.
- . Bulletin, 1881—1883.
- . Société Royale Malacologique,—Annales, Vol. XVIII.
- . Procès-Verbaux, 5th August, 1883 to 6th December, 1884.
- Buenos Aires. Academia nacional de Ciencias,—Vol. VII, Part 3.
- Calcutta. Agricultural and Horticultural Society of India,—Journal, Vol. VII (new series), Part 3.
- . Geological Survey of India,—Memoirs, Palæontologia Indica, Vol. I (series IV), Part 4.
- Dorpat. Naturforscher-Gesellschaft,—Archiv für die Naturkunde, Vol. IX (series I), No. 5.
- . Sitzungsberichte, Vol. VI, No. 3.
- Florence. Società Italiana di Antropologia, Etnologia e Psicologia Comparata,—Archivio per l' Antropologia e la Etnologia, Vol. XIV, No. 3.
- The Hague. Koninklijk Instituut Taal-, Land-, en Volkenkunde van Nederlandsch-Indië,—Bijdragen, Vol. X, No. 2.
- Lahore. Anjuman-i-Punjab,—Journal (English section), Vol. V, Nos. 13—15 and 17.
- London. Academy,—Nos. 671—675.
- . Anthropological Institute of Great Britain and Ireland,—Journal, Vol. XIV, No. 3, February, 1885.
- . Athenæum,—Nos. 2994—2998.
- . Geological Society,—Quarterly Journal, Vol. XLI, Part I, No. 161, February, 1885.
- . Nature,—Vol. XXXI, Nos. 802—806.
- . Royal Astronomical Society,—Monthly Notices, Vol. XLV, No. 3, January, 1885.
- . Royal Microscopical Society,—Journal, Vol. V (series II), Part I, February, 1885.
- Paris. Société de Géographie,—Bulletin, Vol. VI (series VII), No. 1.
- . Compte Rendu des Séances, Nos. 5 and 6, 1885.
- Philadelphia. Academy of Natural Sciences,—Proceedings, Part 3, November to December, 1884.
- Pisa. Società Toscana di Scienze Naturali,—Atti, Vol. IV, Fasc. 3.

Rome. Società degli Spettroscopisti Italiani,—Memorie, Vol. XIV No. 1.

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PROCEEDINGS

OF THE

ASIATIC SOCIETY OF BENGAL.

FOR JUNE, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 3rd June, 1885, at 9-15 P. M.

DR. RAJENDRALALA MITRA, C. I. E., in the Chair.

The minutes of the last meeting were read and confirmed.

Several presentations were announced as detailed in the appended Library List.

The following gentleman proposed and seconded at the last meeting was ballotted for and elected an Ordinary Member :

Maulavi Naemwoollah, Deputy Magistrate, Bulandshahr.

The following gentleman is a candidate for election at next meeting :—

Professor Nilmani Mukharji, Presidency College, proposed by Dr. Rajendralala Mitra, seconded by Major J. Waterhouse.

The following gentlemen have intimated their wish to withdraw from the Society :

J. F. K. Hewitt, Esq.

J. Copley Moyle, Esq.

R. Logan, Esq.

The SECRETARY reported the death of the Rev. K. M. Banerjee, who had been a member of the Society from the year 1860 to his withdrawal in April last, and read the following account of Dr. Banerjee's life and labours.

The COUNCIL have to announce their deep regret at the loss the Society has sustained by the death, since the last meeting, of the Rev. Dr. Krishna Mohun Banerjea.

Dr. Banerjea was born in 1813 and received his education in the Hare School and Hindu College. At the latter place he came under the influence of one of the masters, Henry Derozio, the poet, who discussed all kinds of subjects with his pupils and directed their minds towards the improvement and regeneration of their countrymen, though at the same time destroying their religious beliefs. Derozio's teaching produced a great convulsion in Hindu society. Krishna Mohun who was one of the leaders among the pupils was expelled from his home. He became a teacher in the Hare School, and started a weekly newspaper called the "Enquirer," in which he attacked Hinduism and the orthodox party. About this time Dr. Duff, who saw the unsettled state of mind of the educated young men of Bengal with regard to religion, delivered a course of lectures on Christianity, in consequence of which Krishna Mohun accepted the Christian faith in 1832. He then studied Theology in Bishop's College, and was at length ordained a priest of the Church of England. About 1840 he became the Minister of the Church at Cornwallis Square; whence he was afterwards transferred to Bishop's College as a professor. He remained there 15 years, and then retired on pension. It was during these two periods that he carried on most of his literary labours. He was for many years Examiner of Fort William College, and in the Calcutta University; he was also a prominent member of the Calcutta Municipality. In 1876 the University of Calcutta conferred on him the degree of Doctor in Law, and in the beginning of this year he was created a Companion of the Order of the Indian Empire. He died on 11th May, 1885, and is buried at Bishop's College, the present Sibpur College.

It is in his character of oriental linguist that Dr. Banerjee is specially interesting to the Society. He was elected a member in 1860, and served for many years on the Philological Committee. He edited for the Society in the *Bibliotheca Indica* the *Markandeya Purana* in 1862, and the *Narada Pancharâtra* in 1865; and he also translated into English the *Brahma Sutras* with Sankara's Commentary in 1870, and the *Mahim-nastava* a hymn to Siva. He contributed besides two papers, one on the Translation of Technical Terms in 1866, and the other on Human Sacrifices in 1876.

The numerous employments of a busy career did not allow him to devote much time to philological studies; but his acquaintance with Sanskrit and the languages derived therefrom was both accurate and profound, and his contributions to the Society's journal and publications possess a permanent value.

The PRESIDENT expressed his own regret at the death of Dr. Banerjea, and the sorrow the Hindu community had felt at the loss of one of their leading members who was distinguished for his literary attainments and public services.

The PRESIDENT reported that Mr. Pargiter had resumed his duties as General Secretary, and proposed a vote of thanks to Major Waterhouse for his services as General Secretary; the vote was carried unanimously.

The following paper was read:—

Natural History Notes from H. M.'s Indian Marine Survey Steamer Investigator, Commander ALFRED CARPENTER, R. N., Commanding.—No. 3. *On the Prothallus of Padina pavonia.*—By G. M. GILES, M. B., F. R. C. S., *Naturalist to the Indian Marine Survey.* (Postponed from previous meeting.)

(Abstract.)

The author in this paper describes certain oval deep-green bodies about 5 mm. in diameter, which he had found growing on the fronds of this common sea-weed, and scattered in clusters in immense numbers on the surrounding rocks; and arrives at the conclusion that they represent the prothallus or sexual stage of the plant—the stage usually met with being asexual and answering to a fully formed fern. Only one kind of spore is produced by the asexual plant, alternating with tufts of jointed hairs which the author regards as paranemata in opposition to Agardh, who appears to have mistaken these structures for antheridia. In many instances very young fronds of *Padina* were observed sprouting from the circumference of the prothalloid bodies, which in these cases had already begun to shrivel and decay. The minute structure of the prothalloid bodies is described in detail. The tissue containing abundant chlorophyll which gives to the bodies their beautiful green colour, is encased in a coating of white transparent cellular substance thicker and more opaque on the lower than on the upper surface, where it permits the subjacent green tissue with its marbling of darker green to be seen through it. This outer or peripheral tissue is composed of a network of stellate cells with anastomosing tails, resembling the adenoid tissue of animal histology, and enclosing in the meshes of its lower part a number of opaque spherical bodies, which appear to consist of one or more layers of minute colourless rods radiating from a common centre, so that their entire periphery is beset with minute blunt spines. It encloses a number of tubular bodies, which are supported by bands springing therefrom, the interstices being filled

with spherical nutritive cells containing much chlorophyll. The tubes are scattered in masses through the nutritive central substance, and in each mass two kinds of tubular bodies are to be distinguished differing markedly in size and in the nature of their contents. Of the two kinds of tubular masses of cells, the smaller contains in its lower part masses of cells, each consisting of an oval mother cell enclosing three daughter cells, the contents of which break up into a number of small spherules of a brilliant carmine colour, which in their turn break up into minute rods of the same bright colour: these the author considers to be antherozoids, the tubes producing them being antheridia. The tubes of the other kind are larger and are usually found close to the smaller kind, being commonly enclosed in the same sheath of small-celled tissue. Their lining is usually much thicker than that of the smaller or antheridial tubes, being ordinarily composed of two layers of larger cells. The greater part of their length is as a rule filled with mother and daughter cells, differing from those of the antheridia in containing no coloured spherules or rods and in their more granular contents. Their mode of production is described: a lining cell grows out into the lumen of the tube producing a string of cells which curls round on itself for a turn and a half; and the oldest cell in the middle of the spiral divides into daughter cells. These larger tubes are considered to be archegonia. Fertilisation, the author surmises, is effected by the breaking down of the ripe antheridial and archegonial tubes and the consequent mingling of their contents.

Mr. WOOD-MASON regretted that the author of this interesting paper had not had an opportunity of thoroughly tracing the development of the tubes which he considered to be of the nature of archegonia, and expressed the opinion that the hedgehog cells were degenerated chlorophyll-containing spherical cells, rather an ulterior stage in the development of the spore-like contents of the larger tubes, and that the layers of transparent rods giving to the bodies in question their spiny appearance were probably crystals of carbonate of lime.

The paper will be published with illustrations in the *Journal*, Part II, for the current year.

LIBRARY.

The following additions have been made to the Library since the meeting held in May last.

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Settlement Reports of the Districts of Bannu and Dehra Ismail Khan in the Punjab, 1872-1879 with 2 Atlases. 8vo. Lahore, 1879.

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Anales Estadisticos de la Republica de Guatemala for the year 1883. 4to. Guatemala, 1884.

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 Catalogue of Fossil Mammalia in the British Museum, Part I. 8vo. London, 1885.
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 Guide to the Collection of Fossil Fishes in the department of Geology and Palæontology. London, 1885.
 Guide to the Galleries of Mammalia in the department of Zoology of the British Museum. 8vo. London, 1885.

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- . Annales de Chimie et de Physique,—(6th Series), Vols. II, July and August, 1884; III, September and October, 1885; IV, March, 1885.
- . Journal des Savants,—February, 1885.
- . Revue Critique,—Vol. XIX, Nos. 9—12.
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- DISTANT, W. L. Rhopalocera Malayana, Part VIII. Fol. London. 1885.
- ROMANES, G. J. Jelly-Fish, Star-Fish and Sea-Urchins, being a research on Primitive Nervous systems. 8vo. London, 1885.
- TEMPLE, CAPTAIN R. C. Legends of the Punjab, No. 21. 8vo. Bombay, 1885.
- TRYON'S Manual of Conchology, Part XXV; second series, Part I. 8vo. Philadelphia, 1885.
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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL.

FOR JULY, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 1st July, 1885, at 9-15 P. M.

Dr. R. MITRA, C. I. E., President, in the Chair.

The minutes of the last meeting were read and confirmed.

Several presentations were announced, as detailed in the Library List appended.

The following gentleman proposed and seconded at the last meeting was ballotted for and elected an Ordinary Member of the Society.

Professor Nilmony Mukerji.

The following gentleman is a candidate for election at the next meeting :

John Barnett, Esq., Branch Pilot, proposed by J. Wood-Mason, Esq., seconded by H. B. Medlicott, Esq.

The PRESIDENT exhibited some Sanskrit manuscripts treating of ancient Hindu Veterinary art.

DR. MITRA said—the five MSS. which he laid on the table referred to Veterinary art, a subject which had not yet been noticed by any European orientalist. This was due to the extreme scarcity of Sanskrit works on the subject, and to the neglect with which it had been treated by the modern Paṇḍits of the country. Nor was that a matter of wonder. The later Paṇḍits who wrote Sanskrit works were mostly hermits, yearning for a hereafter, having little care for the affairs of this world, or priests engaged in ritual duties. To them the characteristics and diseases of horses offered no attraction; so they never studied

or wrote any work about them, nor cared to preserve them. Such was, however, not the case in ancient times when Bráhmans and scholars were kings and ministers, and the horse was looked upon as a vitally important element of a kingdom. Then, as a literary nation, the Hindus wrote works on that subject, as on all other subjects which engaged their attention. When the first attempt was made systematically to study the veterinary art, it was not easy to determine, but there was every reason to suppose that it dated from a very remote period of antiquity, when medicine for human ailments first attracted attention. According to Greek tradition the oldest surgeon was Cheiron, son of Kronos by the ocean nymph Philyra, whom Kronos metamorphosed into a mare to prevent his wife Rhea ill-treating her. Born from the womb of a mare, Cheiron was a Centaur. According to some he was a Thessalian prince of the 13th century B. C., and foster-father of Æsculapius to whom he taught his art. According to the Vedas the surgeons of the gods were the twin brothers Ásvinikumára, who were born of a mare. Bearing in mind the close relationship which Greek mythology bears to Vedic traditions, it may safely be inferred that there was an Aryan story current in Central Asia before the Aryans separated into Greeks and Hindus, and that the stories of the Ásvins and of Cheiron were different versions of that original. This carried back the date of the origin of veterinary art to a period of which little was now known; but it sufficed to establish the extreme antiquity of the art among the Indians. The Ásvins were described to have taught the art of medicine to Atri and other sages, from whom it has descended to us. The sages and their immediate followers do not seem to have paid much attention to veterinary art, and there is no tradition to show how the art taught by the Ásvins was preserved. It would seem that after a time the art was split into two parts, one devoted to cattle, and the other to horses. Of the former the most ancient and renowned professor was one Pálakápya, who is frequently noticed in the Puráṇas and elsewhere. The only work attributed to him that Dr. Mitra had seen was a treatise on the training and treatment of elephants; but from the style of the work he suspected it was of a much later date. In some modern MSS. the word is written Pálakápya, but that is obviously incorrect. For the second branch, the earliest professor and author named was Sálihotra. Some say he was a native of Salátura, a town in the neighbourhood of Kandahar, ancient Gándhára. The great grammarian Páṇini was a native of this town, and hence his surname Sáláturiya. Some go the length of saying that Sálihotra and Páṇini were names of the same person; others identify Sálihotra with Dhanyantari; but Dr. Mitra could find no reason to

justify these conjectures. Anyhow, Sálihotra gave his name to the horse, to veterinary medicine, and to the horse-doctor. The most popular name for the horse-doctor all over Hindustán proper is *saluter*, and his art is called *Saluteri*. No authentic work of Sálihotra has come down to the present day; but the *Agni Purána* quotes several chapters, which it attributes to him, and Sir Henry Elliot notices a Persian work, named *Kurraṭ ul Mulk*, which he found in the Royal Library at Lucknow, and which professed to be a translation from an original named *Salutár*, which, it said, was the name of an Indian, a Bráhmaṇ and the tutor of Suśruta. The preface of that work, with characteristic ill-feeling, says that the translation was made in A. H. 783 (A. D. 1381) "from the barbarous Hindi into the refined Persian in order that there may be no more need of a reference to the infidels." It was a small work, divided into eleven chapters and thirty sections. Sir Henry refers to another Persian work which was translated from a Sanskrit MS. which one Sáiyid Abdullá had plundered from the Library of Amar Siñh, of Chitor, during the reign of Jahángír. The Sanskrit name of the work is said to have been *Salutári*. Neither of these referred to an Arabic translation which was published at Bagdad under the name of *Kitab ul Baitarat*. The only Hindi work Dr. Mitra has found bears the name of *Sálihotra*, and a MS. of it was laid on the table. Judging from its size and character, Dr. Mitra was under the impression that that was the work from which the Persian version of the 14th century had been made; but as he had not seen the Persian version, he could not speak with any certainty. The name of the Hindi translator was Chetana.

Soon after Sálihotra come the twin Pándava brothers, Nakula and Sahadeva, who were reputed to be the natural born twins of the Áśvins, and devotedly attached to the profession of their parents. The Mahábhá-rata does not refer to any work written by them, but Dr. Mitra laid on the table a MS. which professes in its colophon to be the work of Nakula, the elder of the two brothers. The colophon gives two names to the work. *Sálihotra* and *Ásvachikitsita*: the words of the colophon are *Nakulakṛite Sálihotre Ásvachikitsite*. Its language is archaic and enigmatical, and it is limited to 18 short chapters. It opens with an anecdote of Sálihotra who is appealed to, to describe the qualities of horses fit for the use of Indra. Old as the work doubtless is, there is no positive proof to show that its author was really a Pándava. There is nothing in the text to prevent the assumption that the author was of a much later date and of less dignified pedigree. On a cursory examination Dr. Mitra found the Hindi work to be a very loose rendering of this text.

Dr. Mitra next noticed a work entitled *Vájiśāstra* or "Horse science." The codex is very corrupt and full of lacunæ, and it was the only one that had been seen by him. It had been obtained from a correspondent at Kathmandu, who copied it hastily, not being able to purchase the original. The author of it calls himself Dípañkara "whose mind was unswervingly devoted to the feet of the great Buddha Dípañkara." His father's name was Mánákara, "who was like Buddha himself, the son of Suddhodana." His grandfather was Trinidhanakara, who was a great physician and resident of Kátára (? or Tátára). As the codex is very corrupt, Dr. Mitra had not been able to make much use of it.

The next work on the table was called *Aśva-vaidyaka* or "treatment for horses." It had been sent to Dr. Mitra by a correspondent in Nepal, but it had been copied with more care, and was in a better state of preservation. Its author's name was Jayadatta, son of Vijayadatta. It is a comparatively modern work, and professes to be only an epitome; but it extends to 68 chapters. It treats at some length on all the topics which come under its purview, and the information contained in it would be very useful and interesting to a large number of readers. If a second codex could be got, Dr. Mitra would have strongly recommended it for publication in the *Bibliotheca Indica*. It opens with the anatomy of the horse, giving names for all the parts of the body, and points out what are reckoned as defects of those parts. In connexion with this subject there are two chapters which treat of the various whirls of hair on the head, face, neck, chest, and the legs which are supposed not only to presage the fate of the animal, but also the good or evil luck which the animal is sure to bring to its owner. This curious folklore prevails all over India, both among the Hindus and the Muhammadans, and there are several Persian works in which it is treated at length. Dr. Mitra was not aware of the existence of any such folklore in Europe; but closely allied to it was the belief about the colour of the feet of horses. Most people were doubtless aware of the saying:

"One white foot—buy a horse;
Two white feet—try a horse;
Three white feet—look well about him;
Four white feet—do without him."

In India the folk-lore on the subject is just the reverse. Knowing people will have nothing to do with a horse that has only one or two feet white, but they prize highly a horse stockinged on four feet and having a blaze on the forehead. It is called *Panchakalyána* or "five-fold auspicious." Ideas of good and evil luck are also associated with the neighing, weeping and refusal of food by horses, and the work under

notice treats of them in some detail. Dr. Mitra found in it no mention of the horse-shoe, though the *Rig Veda* refers to it in one of its verses. The belief in the value of the horse-shoe as a means of securing good fortune, so prevalent in England, is unknown in India, except among a few farriers in Calcutta and Bombay who have, doubtless, got it from their English teachers. The work next treats of the size, motion, colour, span of life, stages of life, and races of horses. In treating of age the work points out the value of the cavities, colour and the grooves on the incisors as sure indications, warning the reader at the same time about the wicked practice of bishopping. The feeding, stabling, and breeding of horses next follow, and the rest of the work is devoted to the treatment of the diseases to which horse-flesh is subject. Bleeding, blistering, actual cauter, poulticing and fomentations are largely recommended, and the list of *materia medica* given is pretty large. Among the diseases mentioned, both glanders and farcy find a place. The former is called *ghrini*, and the latter *utkarna*. These names do not occur in any Sanskrit dictionary; but the descriptions given leave no room for doubt in the matter. The *ghrini* is described to be a disease characterised by the flow of offensive purulent matter from the nostrils, and always to terminate fatally. The *utkarna* is known by a harsh, rough pilage, attended with large glandular swellings on the neck, chest and the legs, followed by the loss of power of action in the ears, tail, and the skin of the body; the swellings run to suppuration and bring on death.

Dr. Mitra added that he had an intention of preparing an analysis of the work in the form of a paper, and hoped to have an early opportunity of submitting it for the Society's Journal.

The PHILOLOGICAL SECRETARY laid on the table "A Comparative Dictionary of the Biháří language," Part I, by Messrs. Grierson and Hoernle, presented by the authors.

Mr. BEAMES remarked—

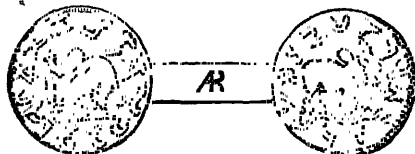
This is the first instalment of a most valuable and important work presented to the Society by the joint authors, both of whom are well-known not only as philologists of the first rank, but as having devoted special study to the languages of Bihár. Dr. Hoernle in his *Comparative Grammar of the Gaudian languages* was the first to point out the marked differences between the speech of Bihár and the ordinary Hindí, and Mr. Grierson in a series of grammars has minutely and carefully worked out all the peculiarities of the dialects of that province. In his grammars the last named scholar gives only three leading dialects the Bhojpúrí, Maithilí, and Magahí; but in the dictionary a fourth dialect is included, the Baiswáří, spoken in eastern Oudh and as far south as

Jabalpur. This dialect can hardly be called Biháří, as it is spoken in a tract of country lying outside of the political boundary of the province of Bihár, nor is it pure Biháří being largely mixed with Western Hindí. The inclusion of this closely allied dialect has, however, the advantage of enabling the authors to explain and illustrate the *Rámáyan* of Tulsí Dás, by far the most popular modern work in all Northern India which is written in Baiswáří.

Although the present instalment only carries us as far as the first quarter of the first letter of the alphabet, yet there is sufficient material to enable a judgment to be formed as to the plan and execution of the work, and there is an extremely lucid and valuable introduction in which the authors explain their system of transliteration, their method of dealing with the short and obscure vowels which form so marked a feature in Biháří, as in fact in all unwritten peasant dialects, also their treatment of certain declensional and conjugational peculiarities. They further explain at some length the origin of these dialects from the *Mágadhí Prákrit*, the division of words into classes according to their derivation, and many other interesting points relating to the scanty literature of Biháří.

In the dictionary itself we find a method of treatment far more accurate and scientific than has yet been applied to any Indian language. Each word, even each dialectic form of a word has a separate article devoted to it, in which its various significations are given in their true linguistic order of succession, and illustrated by ample quotations from literature or colloquial phrases, and finally the derivation is carefully traced from the Sanskrit down through the various phrases of *Prákrit*, with the corresponding forms of the word in the other Aryan languages of India. Nothing so thorough and complete as this has ever been attempted before for any Indian language. The thanks of the Society are due to the authors for this extremely valuable work, and it is to be hoped that they may be enabled to bring it to a satisfactory conclusion.

The PHILOLOGICAL SECRETARY read the following note on an old Hindú coin by the Rev. Charles Swynnerton, and a letter from General Cunningham on the same subject :



Size of the coin—precisely as in the figuring.

Weight— $33\frac{1}{2}$ grains exactly.

This silver coin which appears to be unique comes from the Kángrá Valley. I was riding through the district last June, when I turned into a village in the hope that I should find some specimen coins of the Kángrá Rájás. I was entirely unsuccessful, but as I was leaving the village, a silversmith ran after me and offered me this coin for which I paid him six annas. At first I imagined it to be a pure Bactrian, but the absence of the Greek letters puzzled me. Subsequently I referred it to General Cunningham who was good enough to interpret it for me. The following is the portion of his letter referring to it.

“Simla, 14th June, 1885.

“MY DEAR SIR,

“I thought that I had an impression of a small silver coin like yours, but yesterday on opening a packet of impressions in lead I found that my memory had deceived me, and that your coin is a new one.

“The types of Elephant and Bull are the same as on your coin; but the name is different. I read your coin as follows:

Under the Elephant.

Bhâgevata Mahadevasa Rajaraja.

Under the Bull.

j r j r s v. de h m t. v. g. bh.

“*Bhâgavata* means the worshipper of *Bhagavata*. The king's name is therefore Mahâdeva.

“The other coin of which I have an impression is in the Lahore Museum—and there is a duplicate of it in England, in the possession of Mrs. Freeling.

“I remain,

“Yours sincerely,

“A. CUNNINGHAM.”

The following papers were read—

1. *Notes on Indian Rhynchota.* No. 3.—By E. T. ATKINSON, B. A.

(Abstract.)

This paper is the third instalment of the author's notes on *Rhynchota*. The first was printed in full in the Journal, Pt. II, No. 3 for 1884, and the second in No. 1 for the current year. The present list comprises 59 species distributed amongst the following genera: *Oxyhachis* 5, *Hypsau-chenia* 2, *Leptobelus* 6, *Xiphopæus* 1, *Acanthophyes* 1, *Leptocentrus* 3, *Centrotypus* 3, *Coccosterplus* 1, *Hemiptycha* 1, *Scaphula* 1, *Signoretia* 11, *Tituria* 1, *Bythoscopus* 1, *Tettigonia* 10, *Hecalus* 2, *Thomsoniella* 1, *Selenocephalus* 1, *Siva* 1, *Drabescus* 2, *Jassus* 1, *Thamnotettix* 1, *Hylica* 1, *Penthimia* 2.

The paper will be published in full in Journal, Part II of 1885.

2. "*The Swatch of no ground.*—By COMMANDER ALFRED CARPENTER, R. N., in charge of Marine Survey of India. Communicated by the NATURAL HISTORY SECRETARY.

This paper, which is too brief to admit of being given in abstract, will be published in full in the Journal, Part II, No. 2 for the current year.

3. *A Coincidence in Folk-lore.*—By the REV. CHARLES SWYNNERTON.

When in Naples a few months ago I bought in Italian at a book-stall a copy of the *Liber Facietiarum* of that learned and eccentric ecclesiastic of the fifteenth century, Poggio Bracciolini of Florence, who was one of the brightest ornaments of a period which produced Lorenzo de Medici, Traversari, Bruni, and Politiano, and which first introduced the literary treasures of the ancient Greeks to the nations of West. This, the last edition of Poggio's most remarkable work, was published in Rome in January of the present year, and my object in noticing it here is to record a very singular coincidence which subsists between one of his *facezie*, and a fable which is found among the wild Afghán tribes of our North-West frontier, and which is frequently quoted by the village gossips in ridicule of the gross stupidity of the hill-men of Banér. This fable or rather anecdote appears as Story XV in my lately published volume entitled "*The Adventures of Rája Rasálu and other Folk-tales of the Upper Panjáb,*" and in order to show the singularly close resemblance between the two stories I cannot do better than quote them in parallel columns, the one in English and the other in Italian.

STORY XV.

The Baneyri and his drowned wife.

There was once a sudden flood in the Indus, which washed away numbers of people, and, among others, the wife of a certain Baneyri. The distracted husband was wandering along the banks of the river looking for the dead body, when a countryman accosted him thus:—"O Friend, if, as I am informed, your wife has been carried away in the flood, she must have floated down the stream with the rest of the bodies; yet, you are

FACIZIA LIX.

Di un uomo che cercava sua moglie annegata nel fiume.

Un altr' uomo, cui era morta la moglie nel fiume, andava contr'acqua a ricercarne il cadavere. Uno che lo vide rimase di ciò meravigliato e lo consigliò di andar secondo la corrente:—"In questo modo," rispose l'uomo, "non potrebbe trovarsi; perchè quando visse fu tanto contraddicente, e difficile, e contraria alle abitudini degli altri, che anche dopo morte essa andrà contro la corrente del fiume."

going up the stream." "Ah, Sir," answered the wretched Baneyri, "you did not know that wife of mine. She always took an opposite course to every body else. And, even now that she is drowned, I know full well that if other bodies have floated down the river hers must have floated up!"

Poggio, for his day, was a great traveller, having visited most of the courts of Europe including that of England, so it is difficult to say whether he picked up the story in Italy or elsewhere. In Europe, however, it certainly existed as a household tale in the fifteenth century, and here in the nineteenth it re-appears on the Upper Indus. It is not often that in folk-tales a collector discovers a resemblance so exactly marked, though I possess several, hitherto unpublished, almost as striking in their apparent identity; and the conclusion which seems forced upon the mind from a comparison of these various stories is not so much that they owe their similarity to an accidental coincidence in thought or inspiration among peoples living far apart, like those undesigned coincidences which are also to be observed in the works of great writers and even composers, but rather that they can trace their original source to some common tribe or family of men, whether in Central Asia or elsewhere, whose descendants, extending themselves east and west over the world, carried their household words with them. To those who have made a special study of this fascinating branch of learning, this is the theory which appears to commend itself, so that what is historically true of language in general, is likewise true of those simple tales in which are preserved the primitive deposits of the human imagination.

LIBRARY.

The following additions have been made to the Library since the meeting held in June last.

TRANSACTIONS, PROCEEDINGS AND JOURNALS,

presented by the respective Societies and Editors.

Baltimore. Johns Hopkins University,—American Chemical Journal, Vol. VII, No. 1, April, 1885.

———. Circulars, Vol. IV, No. 39.

Buenos Aires. Academia Nacional de Ciencias,—Boletin, Vol. VII, No. 4.

Calcutta. Original Meteorological Observations,—December, 1884.

———. United Service Institution of India,—Journal, Vol. XIV, No. 62.

Copenhagen. K. Nordiske Oldskrift Selskab,—Aarboger, No. 1, 1885.

———. Memoires, 1885.

———. Tilloeg, 1884.

Dublin. Royal Society,—Proceedings, Vol. IV, Parts 5 and 6, January and July, 1885.

———. Transactions, Vol. III, Nos. 4—6, July and November 1884 and February, 1885.

Edinburgh. Botanical Society,—Transactions and Proceedings, Vol. XVI, Part 1.

Lahore. Aujuman-i-Punjab,—Journal, Vol. V, Nos. 22—25.

Leipzig. Deutsche Morgenländische Gesellschaft,—Zeitschrift, Vol. XXXIX, No. 1.

Liège. Société Géologique,—Annales, Vol. X.

London. Academy,—Nos. 680—683.

———. Athenæum,—Nos. 3003—3006.

———. Nature, Vol. XXXII, Nos. 811—814.

Paris. Société de Géographie,—Compte Rendu des Séances, Nos. 9—11, 1885.

Pisa. Società Toscana di Scienze Naturali, Atti, Processi Verbali, Vol. IV, 22nd March, 1885.

Philadelphia. Academy of Natural Sciences,—Proceedings, Part I, January to March, 1885.

Rome. Società degli Spettroscopisti Italiani,—Memorie, Vol. XIV, No. 4, April, 1885.

St. Petersburg. Comité Géologique,—Proceedings, Nos. 4 and 5, 1885.
 ———. Russian Geographical Society,—Proceedings, Vol. XXI, No. 2.
 Turin. R. Accademia della Scienze,—Atti, Vol. XX, No. 5.

BOOKS AND PAMPHLETS,

presented by the Authors, Translators, &c.

HOERNLE, Dr. A. F. R. and GRIERSON, G. A. A Comparative Dictionary of the Bihārī Language. Part I, 4to. Calcutta, 1885.

MISCELLANEOUS PRESENTATIONS.

Annual Report of the Police Administration of the Town of Calcutta and its Suburbs for the year 1884. Fcp. Calcutta, 1885.

Indian Forester, Vol. XI, No. 5, May, 1885. 8vo. Roorkee, 1885.

BENGAL GOVERNMENT.

Report of the 54th Meeting of the British Association for the Advancement of Science. 8vo. London, 1885.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Report of the Police Administration of the Central Provinces for the year 1884. Fcp. Nagpur, 1885.

Report on the working of the Registration Department in the Central Provinces for the year 1884. Fcp. Nagpur, 1885.

CHIEF COMMISSIONER, CENTRAL PROVINCES.

Excursions et Reconnaissances, Vol IX, No. 21, January and February, 1885. 8vo. Saigon, 1885.

GOVT. OF FRENCH COCHIN-CHINA.

Archæological Survey Reports, Vol. XIX. 8vo. Calcutta, 1885.

HOME DEPARTMENT.

Annual Administration Report of the Forest Department of the Madras Presidency for the year 1883-84. Fcp. Madras, 1885.

Annual Report of the Civil Hospitals and Dispensaries in the Madras Presidency for 1883. Fcp. Madras, 1884.

MADRAS GOVERNMENT.

BLANFORD, H. F., F. R. S. Report on the Meteorology of India in 1883. Fcp. Calcutta, 1885.

International Meteorological Observations, March, 1884. 4to. Washington, 1885.

Monthly Weather Review, March, 1885. 4to. Washington, 1885.

METEOR. REPORTER TO THE GOVT. OF INDIA.

Monograph on Cotton Manufacture in the Punjab. Fcp. Lahore, 1885.

PUNJAB GOVERNMENT.

Addenda to the Bengal Route Book of 1877. 8vo. Simla, 1885.

QUARTER MASTER GENERAL OF INDIA.

Informe Dirijido al Senor Secretario de Fomento Sobre los trabajos por la oficina de Estadistica en el ano de 1884. 8vo. Guatemala, 1885.

REPUBLIC OF GUATEMALA.

PERIODICALS PURCHASED.

- Allahabad. Punjab Notes and Queries,—Vol. II, No. 21, June, 1885.
 Calcutta. Indian Medical Gazette,—Vol. XX, No. 6, June, 1885.
 Geneva. Archives des Sciences Physiques et Naturelles,—Vol XIII, No. 5.
 Giessen. Jahresbericht über die Fortschritte der Chemie,—No. 3, 1883.
 Leipzig. Annalen der Physik und Chemie,—Vol. XXV, Nos. 1 and 2.
 ———. ———. Beiblätter,—Vol. IX, Nos. 4 and 5.
 London. Chemical News,—Vol. LI, Nos. 1329—1332.
 ———. Journal of Science,—Vol. VII, No. 138, June, 1885.
 ———. Nineteenth Century,—Vol. XVII, No. 100, June, 1885.
 ———. Publishers' Circular,—Vol. XLVIII, Nos. 1144 and 1145.
 ———. Society of Arts,—Journal,—Vol. XXXIII, Nos. 1695—1698.
 Paris. Revue des Deux Mondes,—Vol. LXIX, Nos. 1 and 2.
 Vienna. Orientalisches Museum,—Oesterreichische Monatsschrift für den Orient,—Vol. XI, No. 5.

BOOKS PURCHASED.

- TEMPLE, Captain R. C. Legends of the Punjab, Nos. 22 and 23. 8vo. Bombay, 1885.



PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,

FOR AUGUST, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 5th August, 1885, at 9.15 P. M.

Dr. R. L. MITRA, President, in the Chair.

The minutes of the last meeting were read and confirmed.

Several presentations were announced, as detailed in the Library List appended.

The undermentioned gentleman, proposed and seconded at the last meeting, was ballotted for and elected an ordinary member of the Society :

John Barnett, Esq., Branch Pilot.

Mr. G. S. Leonard and Colonel S. T. Trevor have intimated their wish to withdraw from the Society.

The PRESIDENT announced that Dr. A. F. R. Hoernle had resumed his duties as Philological Secretary, and proposed a vote of thanks to Mr. J. Beames for his services during Dr. Hoernle's absence.

The vote was carried unanimously.

The PRESIDENT reported that the Council had sanctioned the publication, in the Bibliotheca Indica Series, of the following works :

1. The Sāt Sai of Tulsi Das, to be edited by Pandit Beharilal Chaubé of the Patna College.

2. A translation of the Tuzakh-i-Jahangiri, by Professor W. H. Lowe of Cambridge.

Read a letter from the Superintendent, Government Central Museum, Madras, forwarding a specimen of a Viraraya Gold Coin (Fanam) found in the Calicut Taluq and acquired under the Treasure Trove Act.

The NATURAL HISTORY SECRETARY (MR. WOOD-MASON) exhibited *Lyreidus Channeri*, a remarkable new blind Brachyurous Crustacean from the depths of the Bay of Bengal and said—

Four species of true *Brachyura* were dredged up from depths exceeding 100 fathoms during the past season by H. M.'s Indian Marine Survey Steamer 'Investigator.' They belong to the genera *Amathia*, *Ethusa*, *Encephaloides* (new genus allied to *Collodes*, Stimpson), and *Lyreidus*, of which the last named is especially interesting on account of the rudimentary condition of the eyes. These organs are unequally reduced: the cornea of the left being of the normal form and extent, but opaque and devoid of all traces of facets, as in *Munidopsis*, *Orophorhynchus*, *Nephropsis*, and other blind forms of the deep sea, while that of the right is entirely aborted, its place being only indicated by a small smooth spot marked out by the transference of a lead-coloured pigment similar to that which is seen through the integument around the base of the left eye. This interesting brachyuran, which is at once distinguished from the Japanese and American species by having the antero-lateral margins of the carapace armed with two pairs of long and slender spines, was trawled up from a depth of 285—405 fathoms, bottom temperature 48°—50° Fahr., in the 'Swath of no Ground', off the mouths of the rivers Ganges and Brahmaputra.

The PHILOLOGICAL SECRETARY, exhibited copy of the following Persian inscription from Sherpur, sent by Mr. J. Anderson, Magistrate of Murshidabad.

قال الله تعالى كل من عليها فان ويبقى وجه ربك ذو الجلال

دیدیم مسجدیکه درو سر بسر صفا است

آرے صفا چرا نہ بود خانہ خداست

در عهد شاه جهان بناء یسد علی مقولہ

سنہ ۱۰۳۸ ھجری

God the most high has said, "Every creature which liveth on the earth is subject to decay; but the glorious and honourable countenance of thy Lord shall remain for ever."

We have seen a mosque wherein there is entire cleanness;
'Indeed!' Why should it not be clean, (when) it is the house of God.

Built by Sayyid 'Alí, Mutawallí during the reign of Sháh Jahán in the year 1038 A. H.

The PHILOLOGICAL SECRETARY read :

1. A Report on a find of ancient coins at *Pagara* in the Chindwarra district, Central Provinces forwarded by Mr. W. Vertue, Deputy Commissioner, with his No. 2032 of 28th May 1885.

The find comprises coins of the following Sovereigns :—

I. Pathán Sultáns of Delhi.

No. of specimens.

- | | | |
|----|--|---|
| 1. | No. XIX, Muḥammad bin Tughlaq, A. H. 725—752=A. D. 1324—1851. A Khalífat coin. <i>Gold</i> . No date or mint. See E. Thomas' <i>Chronicles of the Pathan Kings of Dehli</i> , No. 213. ... | 1 |
| 2. | No. XX, Fírúz Sháh, A. H. 752—790=A. D. 1357—1388. Round, <i>gold</i> . Date illegible. See <i>Chr.</i> No. 224. ... | 3 |
| 3. | No. XXXVI, Sher Sháh, A. H. 947—952=A. D. 1540—1545. <i>Silver</i> . Dates : 949, 950. See <i>Chr.</i> No. 348. ... | 2 |
| 4. | do. do. do. <i>Silver</i> ; date 949; <i>Chr.</i> No. 351 ... | 1 |
| 5. | do. do. do. <i>Silver</i> ; date 949. Mint: Gwalior. See <i>Chr.</i> 352. ... | 1 |
| 6. | No. XXXVII, Islám Sháh, A. H. 952—960 = A. D. 1545—1552. <i>Silver</i> ; date 960. See <i>Chr.</i> No. 359. ... | 1 |
| 7. | do. do. do. <i>Silver</i> , date 954. See <i>Chr.</i> No. 361, a ... | 1 |
| 8. | No. XXXVIII, Muḥammad, Adil Sháh, 961 = 1553. <i>Silver</i> ; date : illegible. See <i>Chr.</i> No. 365. ... | 1 |

II. Sultáns of Málwá.

- | | | |
|-----|--|---|
| 9. | No. V, Ghiyásuddín <i>Khilji</i> , A. H. 887—906 = A. D. 1482—1500. Square, <i>gold</i> ; date : (of one) 895, others illegible. <i>Chr.</i> p. 349. ... | 3 |
| 10. | No. VI, Násiruddín <i>Khilji</i> , A. H. 906—916 = A. D. 1500—1510. Square, <i>gold</i> ; date (if any) illegible. See <i>Chr.</i> pp. 346, 349. ... | 1 |

III. Bahmaní Sultáns.

- | | | |
|-----|---|---|
| 11. | No. V, Maḥmúd Sháh I, A. H. 780—799 = A. D. 1378—1397. <i>Gold</i> , round. N. B. Imitates coins of 'Aláuddín Muḥammad, the Pathán. See <i>Chr.</i> p. 341. ... | 1 |
|-----|---|---|

No. of specimens.

12. No. VIII, Tājuddīn, Fīrūz Shāh, A. H. 800—825 = A. D. 1397—1422. *Silver* Rupee; date 823. See *Chr.* pp. 341, 345. 1
13. No. X, 'Alāuddīn II, bin Aḥmad, 838—862 = 1435—1457. Round, *gold*; date; [8]55. See *Chr.* pp. 341, 843. ... 1
14. No. XIII, Muḥammad Shāh II, A. H. 867—887 = A. D. 1463—1482; round, *gold* date: 878. See *Chr.* pp. 341, 346, (legend: Abul Muzaffar, Shamsuddīn Maḥammad Shāh, bin Humayūn Shāh as Sulṭān). 1

IV. Jaunpur Sultāns (Sharqī).

15. No. III, Ibrāhīm Shāh, 805—844 = 1401—1440. *Gold*, round; with organ-pipe letters. See *Chr.* p. 321: No. 1, a ... 1

V. Sultāns of Gujarāt.

16. No. XIII, Maḥmūd Shāh III, A. H. 944—961 = A. D. 1537—1553. Small dumpy, *silver*. No date or mint. *Chr.* pp. 351, 353 6

In the collection there are altogether 12 *gold* and 14 *silver*, total 26 coins. They cover a period of two centuries and a quarter, viz. from 1324 to 1553 A. D.

2. A Note by Col. G. E. Fryer on a Burmese copy of the Kalāpa Grammar.

"I have recently obtained a complete copy of the Kalāpa grammar called by the Burmese 'Kalāp Kyan' and I find it to be an exact counterpart of the Sanskrit Kātantra, together with the alternative readings, as edited by Eggeling in the Bibliotheca Indica Series. I am not aware that this fact has been noticed before.

The work is written in Burmese Sanskrit characters upon about 82 palm leaves, eleven lines to a leaf. The Sandhi, Kāraka, and Samāsa chapters take five leaves each. Nāma and Taddhita take eight and six respectively. Akhyāta occupies 24 and Kita 28 leaves. The work closes with 'iti dawrggasīlyā brittan kṛittā shashṭha pāda samāptāḥ.

The forms for the two Sanskrit sibilants, the palatal and lingual, which are wanting in the Burmese alphabet are thus given ङ = दम *daśa*, ten; and फ़ = ष *shash*, six. You will find these two forms given at page 4 of a Burmese grammar printed at Serampore in the early part of 1814, by F. Carey, I think (for my copy of this grammar has no title page). The writer, however, has made his Burmese symbol correspond to the wrong Sanskrit sibilant. His symbols should change places.

Immediately preceding the 82 pages forming the text of the grammar, there is a list of all the sūtras, filling ten leaves. Immediately

following the text there is a Burmese paraphrase of the Sandhi chapter, which occupies 45 leaves. I am told there is no other paraphrase but the one for this chapter. I am not satisfied with my authority for this statement: but it may be so, since it ends in a very definite way thus:—*Aggadhammālankāra therena viracitaṃ sandhikāpanissāyaṃ niṭṭhitaṃ* and gives a date:—*sakkarājassa pana sahassa añña-sattati phussamāsasmim ayaṃ sandhikāpanissāyaṃ niṭṭhitaṃ*, which in the absence of anything to the contrary, I take to be, in Dec.—Jan. 1078 B. E., circa A. D. 1716.”

3. A Note by Mr. J. G. Delmerick on the 100 gold mohur piece, exhibited by Mr. Gibbs at the March meeting,

“The coin which the Hon’ble J. Gibbs, C. S. I. exhibited on the 4th March last and which is noticed in the Proceedings of the Asiatic Society for that month, was offered for sale to me in 1874 by the owner a native banker of Benares. He asked Rs. 2200 for it, but I declined to give more than 1600 Rs. or somewhat more than its intrinsic value, but he refused to accept my offer. I then wrote to Mr. R. S. Poole of the British Museum and asked him if he would buy it for the Museum. In reply under date the 11th June 1875 he wrote to me as follows:—

“‘I am much obliged by your letter in reference to the gold medal of Aurangzib and I regret that I cannot avail myself of your kind aid in the matter as the Trustees never make any outlay for an object which is not submitted to them. I see that a similar medal in silver is in the Cabinet of Gotha; probably it is an impression from the same die. I should say that its value ought not to exceed about £150. I refer to the gold one.’”

When the Imperial Assemblage took place at Delhi the owner came there and presented the coin as a *peshkash* or *nazar* to the Mahārāja of Gwalior, believing no doubt that he would receive some thing more valuable in return, but I was informed that he was cruelly disappointed for he only obtained a *khillat* of trifling value.”

4. A Note by Mr. Chas. J. Rodgers on Major Raverty’s objections to his paper on “Some Coins from Candahar.”

“I am much obliged to Col. Prideaux for his kind remark on my paper, entitled “Some coins from Kandahār.” I have no doubt that the correct reading of the coin is Tāj ud Dīn Muhammad bin Harab. Col. Prideaux kindly pointed this out in a letter to me, as did also my friend L. White King, Esq., C. S. of Peshawur (now of Ajmeer). But Major Raverty in his paper raises no point at all. He rather confirms all I say. The coins of Harab, and Tāj ud Dīn his son, and Nasar bin Bahrām Shāh are according to his showing of Sistān or Nīmroz. Now-a-days we say Nīmroz or Sistān is in the south west of the country marked on our maps as Afghānistān. The coins of Mangú Qāán were

struck at Herat and Gazní as we see from the inscriptions, and Herat is in the north west of what we call now Afghanistan. I do not think I was wrong in saying that these coins were little known. There were none, when I wrote my paper, in the British Museum or in any known collection. My chief sin seems to have been this, that I had not read Major Raverty's translation of the *Ṭabaqát i Násirí*. This sin of omission I am trying to get rid of,—for, as soon as my attention was called to the existence of the book, I at once purchased a copy. I find it a vast repertory of Oriental learning, tinged however with a certain amount of "surprise" at the errors people fall into when studying a subject hitherto little known. We stand on the shoulders of our forefathers, and see further than they did. We ought therefore to be thankful for further light obtained by their labours, and not ridicule their mistakes in a sarcastic manner. Here in the Panjáb, working alone and without a library of reference and with few hours of leisure, there is no wonder that I made and do make small mistakes. Major Raverty, unlike Col. Prideaux, does not give me the credit for discovering the coins and bringing them to notice. Col. Prideaux is, however, a fellow-worker in numismatics and can appreciate the work of others, whereas Major Raverty disagrees with every numismatist, except his own anonymous pet who is wrong in every thing he states."

The following papers were read:—

1. *Notes on Indian Rhynchota.* No. 4.—By E. T. ATKINSON, Esq., B. A.

(Abstract.)

This paper, which is the fourth instalment of the author's notes on *Rhynchota*, comprises 49 species distributed amongst the following genera: *Fulgora* 20 (2 new), *Alcathous* 1, *Pyrops* 2, *Homalocephala* 1, *Limois* 1, *Aphana* 9, *Lycarma* 4, *Euphria* 5 (1 new) *Pharonis* 2, *Gebeuna* 1, *Polydicta* 1, *Ancyra* 2.

The paper will be published in full in *Journal*, Part II for 1885.

2. *On the "Pámir"** from the Russian of Professor Minayeff.—By MAJOR W. E. GOWAN.

The Pámir,† which lies in 36° 35' 70" north latitude and 71° 15' 75' 36"

* Minayeff (Professor I.) *Information relating to the countries along the upper course of the Amu-Daria*. St. Petersburg, 1879.

† The etymological signification of this name has not yet been thoroughly cleared up: formerly it was held to be derived from *Ura-meru*, i. e., the country beneath the mythical mountain Meru, which stands, according to the teaching of ancient Indian Cosmography, in the centre of the earth and this explanation is, perhaps, the most likely. (See Lassen's "*Indische Alterthumskunde*, 1, page 1019, Note 1.) Rawlin-

longitude east of Greenwich, is a high plateau (from 12,000 to 14,000 ft. high) intersected in various directions by ranges that rise a little above the surrounding valleys. Some of these ranges are partially covered with snow, others are snowless. Their height above the valleys varies from 3000 to 4000 ft. Neither valleys nor hollows have any definite direction and in the majority of cases are not wider than $1\frac{1}{2}$ to 2 miles. Notwithstanding the severity of the climate of the Pámir and the poverty of its flora and fauna, nomads frequent its heights. Such visitors come from Káshgaria, Karátegin, Shighnán, and other neighbouring states. But the severity of the climate and the dearth of fodder for the cattle must render a stay in such a country very inexpedient: the summer days are very hot but the nights are cold, whilst the change from the sultriness of the day to the chill of night is extremely rapid. Snow falls to a great depth and lies for a long time even on the southern slopes. Winter-snow begins to fall early in September and remains till May. The winds of the Pámir are constant.

The limits of the Pámir have not yet been defined with exactitude. Although the Pámir has of late been visited by several expeditions both Russian and English, there yet lies between their explorations an interval of about 67 miles in width, which up till now has been visited by no European and is only known from inquiry.

The Alai and Trans-Alai ranges form the northern boundary of the Pámir. The Trans-Alai range runs parallel to the course of the Kizil-Su river, in a direction east and west slightly inclined to south. The average height of the peaks of this range is 18,000 ft., but some of its detached summits exceed 20,000 ft. (Kaufmann peak, for instance). The lowest portion of the Trans-Alai lies where the snowless Kizil Art pass is crossed (14,000 ft.). West of this pass the Trans-Alai considerably inclines to the south turning towards the sources of the Muk-Su, of which, under the name of the Hoi range, it forms the left or southern bank. The bed of the same river is closely confined by its crags. Between the Muk-Su and Kizil-Su rivers there is a second-rate range (14,000 ft. high), which is detached from the main or Trans-Alai chain, and serves as the watershed of those rivers. This range is pierced through by the Attin-Dara gorge and by the low Ters-Agar pass (10,300 ft. high). To the south of the Trans-Alai range lies the

son has recently put forward a new derivation, *viz.*, that the name of Pámir, or Fámír as it is always written by the Arabs, is derived from the Fani, *φάνοι*, who, according to Strabo, founded the first kingdom of Bactria to the east (Strabo, Lib. XI. c. 14), and whose name is also preserved in Fán-Tau, the Fán lake. Fámír or Fán-mír would then be a compound like Kash-mír, Aj-mír, Jessel-mír &c., signifying the lake country of the Fáni. See Rawlinson's Monograph on the Oxus, page 489, note.

small basin of the Kara-kul lake, 13,000 ft. above the level of the sea, and shut in on all sides by snowy ranges. On the south the Pámir is bounded by the Hindu-Kush between the Nuksán and Bárogil passes, and by the Himálayas between the latter pass and the Mustág range. The western confines of the Pámir are still undefined, as this region has not been explored by Europeans. Reconnaissances of the Pámir undertaken in 1876 shewed that on the east it is locked in by a huge snowy range, which reaches heights of at least 24,000 ft.

There are no exact data for the determination of the area of the Pámir. Yule believes the length of this plateau from south to north to be 180 miles, and Kortencko gives the same approximate figures.

There are said to be several lakes on the Pámir: but we have no trustworthy information of all, and the existence of some is open to doubt. Regarding lake Kara-Kul or Pámir Khargoshi the most recent information was collected in 1876. From the mouth of the Kizil-Art gorge on the Alai to the Uz-bal pass the distance is 91 miles, and thence to the Tuzuk pass 80 miles. From the latter to the lake of the Great Pámir (Wood's Sari-Kul) only 67 miles.

The latest information regarding the lake of the Great Pámir has been supplied by Forsyth's Expedition. It is about 10 miles long and 3 broad. Its height is 14,200 ft. Its water was found to be perfectly sweet. The valley in which this lake lies has a width of about 4 miles. The mountains to the north rise to a height of 3000 ft. above the level of the sea, but those to the south exceed them by at least 2000 ft. The same lake, Trotter assures us, is known locally by two names: the more common being Kul-i Pámir-Kalyan, *i. e.*, the Lake of the Great Pámir, and the other Airan-Kul. The name of Sar-i-kul which Wood applies to it is in all probability corrupted; Sar-i-kul signifies the head or beginning of a lake. Other particulars are given by Gordon, another member of Forsyth's Embassy.

The lake on the Lesser Pámir is called Gaz-kul. Gordon says, "It is about 3 miles long and a little less than a mile broad. Its height is 13,000 ft., and the hills on both sides rise some 2000 ft. higher, those to the south being completely covered with deep snow."

"The Alichor Pamir runs east and west, parallel to the Great and Little Pámirs. According to Wakhi accounts, it is similar in character to them, broad at the eastern and narrow at the western end. It is connected with the Great Pámir by the Dasht-i-Khargoshi, a desert which extends across from about 20 miles below the Great Pámir lake.

The Amu-Daria is formed of two principal rivers, the northern the Surkhab, and the southern the Pianja. The northern tributary, under the name Kizil-Su, takes its rise in 39° 42' north latitude

and 43° 18' east longitude approximately. Its bed is about a mile wide, covered with pebbles, and scoured by numerous channels, which change from year to year. The banks are steep everywhere but high only in the lower part of the Alai. The current is rapid but smooth on account of the gradual fall in the level of the valley. The water of the Kizil-Su is turbid and red but is not unwholesome, and it becomes clear when allowed to settle. The tributaries of the Kizil-Su on its right bank are few and small. Those on its south bank are larger and more numerous. The Kizil-Su leaves the Alai as a river of great volume. Below Karategin after being joined by the Muk-Su it receives the name of Surkhab, but of its course here we have no trustworthy information, since this mountain country has not yet been visited by a single European traveller. In its lower course the name Surkhab is changed to Wakhsh. The river then flows between the steep and rocky ranges of the Mir-Tag and Hojankur with furious rapidity. In one of the narrowest parts of this gorge, where the rocks approach each other to within a distance of 20 paces, the famous Pul-i-Sangi (or Stone bridge) has been erected on the projecting crags. In the same place and along the bank of the river, a road of extraordinary difficulty leads from Faizabad to Baljuan and Kuliab. In many parts it has been hewn in steps out of the rocky and steep sides of the crags above. After passing through a gorge dividing the Khodja-mast and Tabakti ranges, the river comes out into the Kurgan-Tube valley (the ancient State of Kholet). Here the Wakhsh divides into several arms which form marshy and low-lying swamps.

The southern source of the Amu-Daria bears, as we have said, the name Pianja (the Oxus). The Pianja is made up of two rivers, *viz.*, the southern called the Pianja, and the northern called the Murghab, which in its upper course bears the name of Ak-Tash or Ak-Su. The Ak-Su issues from the lake of the Lesser Pámir. The latest circumstantial information has been communicated by Trotter in the working of the Forsyth Expedition. The river Pianja is formed by the junction of the two Pámir tributaries of the Murghab. The course of the Pianja is south-westerly, and the extent of it, as far as Wakhan, is 63 miles. Its valley varies in width from 1 mile to a few hundred yards only. Beyond Barshar, an abandoned settlement of considerable size, there enters the Pianja from the east the Boguz. Sixteen miles below Barshar are the famous ruby mines. The valley near Barshar contracts to about one mile in width. The stream is narrow but swift, being not more than 200 feet across and its course an almost continuous succession of rapids. From Kuguz-Parin the course of the Pianja lies through the Shighnan country, which extends for a distance of 60 miles, *i. e.*, as far as the Darband Tower on the frontier of Roshan. In its passage through Shighnan, the Pianja

receives two considerable affluents on its left bank, the Shewa and the Vachew. Along the latter lies a much-frequented road from Shighnan, over the Shewa Pámir to Faizabad. On its right bank the Pianja receives one very large river, the Suchán, which is formed by the junction of two large equal streams, the Shah-Dara and the Ghund. The Suchan enters a few miles south of Bar-Pianja. The valley here opens out to a width of about 4 miles and contains a good deal of well cultivated land and pasturage. Two and a half miles beyond Darband the Murghab enters the Pianja. The valley of the Pianja, which at Darband is very narrow, rapidly widens after the Murghab has entered it until the breadth is about 5 miles. The frequent inundations of the Murghab interfere with cultivation. This river, though generally called the Murghab, is also known by the name of the Darya-i-Bartang, which is the name also of the district through which it flows. Between Waznud and Bar-Roshan the Pa-i-Khoja valley enters that of the Pianja from the south. The road to Kila-Khumb, the chief town of Darwáz, along the river is very difficult and impassable for pack-horses, the valley being very narrow and the banks of the river very precipitous. The most important of the affluents of the Pianja is the Kitchi Surkh-ab or Baljuan Daria, which is called Kitchi or Little to distinguish it from the greater Surkh-ab or Wakhsh. It waters the Baljuan valley and takes its rise in the mountains to the north of the Baljuan Begship where it is made up of many streams.

The Amu-Daria by receiving the waters of the Surkh-ab or Wakhsh receives also the following affluents: 1. Kafir-nihan, which is made up of several mountain streams. The rise, however, of this river is usually taken to be the Roment Daria, which issues from the snowy masses of the Hissar chain. In the basin of the Kafir-nihan there are five considerable towns: Faizabad, Kafir-nihan, Doshamba, Hissar and Kobadian. 2. The Surkhan, which is made up of several rivulets that flow from the mountains surrounding the wide valley of the Surkhan river. Within this valley are situated the towns of Kara-Tag, Regar, Ssar-i-Iui, Ssar-i-Osio, Yurtchi, and Denan. The population of the valley is chiefly confined to its northern portion where the abundance of mountain streams make it possible to irrigate the soil without any very great expenditure of labour. 3. The Shir-abad-Daria, which at the town of Darband is called the Darband-Daria. It is fordable everywhere and indeed does not reach the Amu-Daria every year, because its waters are diverted by means of canals over the hamlets of the Shir-abad Begship. Hence its supply is not always sufficient for the steady and yearly irrigation of the whole locality.

The most important tributaries of the Amu-Daria on the south

are the Koktcha and the Ak-Sarai. The Koktcha is made up of two streams, the Vardoj and the Jirm, which unite at the Shash-pul bridge above the Faizabad passage. The Jirm is a river of greater volume than the Vardoj. Within the valleys of its upper course are the provinces of Kuran, Anjuman, and Parian, which are dependencies of the Jirm province. The Bamian stream is held to be the main source of the Ak-Sarai, and this enlarged by many feeders flows into it from the Ak-Rabat pass and other neighbouring gorges. At Zokhak, in the north-east end of the Bamian valley, the Bamian stream is joined by another of almost equal size, which descends by the wild Pimuri defile from the Hajigak pass. From here the stream turns northward and receives from the west the waters of the Saigan and Kamard. Near Dorhi, 85 miles north-east of Zokhak in a direct line, the Inderab enters it. The latter river, which collects the waters of the main range of the Hindu Kush, parallel to which it flows for more than a degree's length, must bear a great volume of water to either the Ak-Sarai or the Surkhah.

Westward of the Ak-Sarai flow the Dehas and Khuhu rivers, but they do not reach the Oxus, because their waters are diverted into various canals. Both take their rise in the Hindu Kush and flow northward.

Political divisions.

In recent times not a single European traveller has visited Balkh, Khuhu, and Kunduz, or Kataghan. The following information regarding these towns has been furnished by old travellers.

Badakshan has a length of about 200 miles from Wakhan on the east to Talikhan on the west, and its width from Yan-Kila on the north to the Hindu Kush on the south is about 150 miles. Its most important political dependencies are: in the centre, 1, Faizabad or Jirin; 2, Daraim; 3, Shahr-i-Buzur; 4, Gumbaz: on the west, 5, Farakhar; 6, Kishm; 7, Rustak: on the east, 8, Roshan; 9, Shighnan; 10, Ishkashmi; 11, Wakhan: on the south-east, 12, Zaibak; 13, Muijan: on the north, 14, Ragh; 15, Danu; 16, Asiab. All these are dependencies of Badakshan and are ruled by kinsmen of the Mir or by his hereditary vassals. They are obliged to furnish their suzerain with war resources in case of need, and they pay some a very small tribute and some none at all. Within their respective territory their power is very limited, and they are also called *Mirs*.

The first circle mentioned that of Faizabad comprises the following subdivisions: 1, Faizabad; 2, Yaftal; 3, Argu; 4, Shewa. The chief town of this circle is Faizabad. Yaf'al and Shewa are fertile and thickly populated localities. The inhabitants of the former are Tajiks, and from

amongst this race one of the ancestors of the present heir ascended the throne of Badakshan. The people of Shewa are Turks of the Yakka-Mogal tribe, and are very devoted to the ruling dynasty. Yaftal is cut off from Faizabad by a low chain of mountains. Argu and Shewa are both wide plateaus. The former is separated from the somewhat more depressed plain of Faizabad by a very low pass called Kotal Rashkan, 15 miles long and 8 wide. The Argu plateau is covered with cultivated land which belongs to the Court and Government. The Shewa plateau stretches east of Faizabad for a distance of some 20 *kos*. Its climate is a little colder than that of other parts of Badakshan, and here are found more abundant pasture lands. Sar-i-kul lake, which has a circumference of nearly 20 miles, lies on the Shewa plateau.

The valleys of the rivers Koktcha and Kuran as far as Dasht-i-Bakharak comprise the famous province of Yamgan or Khamakhan. Herein are found most of the Badakshan mines of lapis-lazuli, copper, ammoniac, sulphur, and ochre (*zagh*). Dasht-i-Bakharak is also called Dasht-i-Farakh and is the most fertile plain of Badakshan.

Ruby mines exist at Ishkashmi on the Shighnan boundary; iron mines at Arghanjva in the Faizabad district about one day's journey north-west of Dasht-i-Bakharak; and salt mines at Ak-Bulak near the Lattaband pass in the Farakhar circle, and at Darun in the Karlig or Kullak province.

Much grain is raised on the Rustak plain, and its climate is very healthy. The intelligence of its inhabitants is held to be of a very high order and their physique very fine. The best Arab linguists and courtly people come from this country.

Meshed, the largest town in the Kishm circle, lies on the right bank of the river of the same name. It contains about 150 houses and an old mud fort. Meshed lies on the caravan road between Kunduz and Faizabad in the most fertile part of the valley which bears that name.

The circles of Gumbaz and Asiab are situated in the lower portion of the Meshed valley. Both are subject to a Mir who is connected with the ruling dynasty of Badakshan. In the Gumbaz circle are the tombs of those first Muhammadan martyrs who gave the name to the town of Meshed where they fell.

The circles of Muijan, Zaibak, Ishkashmi, Wakhan, Shighnan, and Roshan are more mountainous than are those above described, and their climate is more severe. Their inhabitants too differ from those of the preceding circles in faith, language, character, customs, and dress.

The inhabitants of Badakshan proper are Tajiks, Turks and Arabs, of whom the former are most numerous. They are Sunnis and speak in Persian and Turki. Those of the more mountainous countries are

Tajik Shiahs and have distinct local dialects, though in the principal places they also speak Persian. The Turks are richer than the Tajiks, and excel them in bravery, in aptitude for war, and in capacity for trade. Of the eastern provinces of Badakshan recent information has been given by members of the Forsyth Embassy.

Wakhan extends from the highlands of the Pianja and along the valley of the same river, from Zan to Ishkashmi. The Great and the Little Pamir belong to Wakhan, whilst the Ak-Tash river constitutes the well-recognised boundary between it and Kashgaria. Both Pamirs were thickly populated by Kirghiz and were in former years subject to Wakhan, but they are now unoccupied, the constant feuds between the Shighnans, the Wakhans, the Kirghiz of the Alai, and the Kanjadis having rendered the country quite unsafe. Wakhan was formerly divided into three districts of 100 houses each, which were therefore called *sads* or "hundreds:" 1, Sad-i-kila Vost or Sarbadd, extending from Langar to Hissar; 2, Sad-i-Pianja, from Hissar to Khandut; 3, Sad-i-Khandut, from Khandut to Sad Ishtagh. To these three *sads* was afterwards added a fourth, that of Sad Ishtagh which, it would seem, only became a portion of Wakhan in recent times. It lies between Khandut and Ishkashmi.

Ishkashmi and the neighbouring circle of Zaibak are under the same rule. The present territory of Ishkashmi extends for about 16 miles to the north of the village of the same name, which now contains about forty houses.

The Gharan country extends along both banks of the Oxus for about 24 miles. It was once rich and populous. The ruins of large villages to be seen on both banks of the river testify to the bad rule of former Badakshan potentates. The fields adjoining such abandoned villages are still cultivated by the inhabitants of the neighbouring Badakshan circles of Ragh and Sar-Gholam. Both the circles are distant about a day's journey from the river and lie on the far side of the mountain chain which runs parallel with the left bank of the Oxus. In Gharan are famous ruby mines, and the country is distinguished for its cattle and fruit.

Shighnan extends from Kuguz-Parin to the Tower of Darband on the Roshan frontier. It is richer than Wakhan or any of the other parts of Badakshan. Villages abound on both banks of the river between Kuguz-Parin and the Darband Tower, and all are surrounded with gardens and well-tilled fields. Bar-Pianja, the capital of Shighnan, stands on the left bank of the river. In it and its suburbs there are about 1500 houses. Two days' journey from Bar-Pianja on the river Shah-Dara is the large fort of Ratch. This is the residence of the Governor or Hakim of the Shah-Dara circle.

Roshan begins beyond the Tower of Darband. It is a dependency of Shighnan and is ruled by Yusuf Ali Khán. Three miles below the junction of the Murghab and Pianja and on the right bank of the latter river is Wamar the chief town of Roshan. It is in a very flourishing condition, and the soil around is very fruitful. Roshan is divided into three circles: 1, Wamar, which lies on the right bank and embraces the upper portion of the Oxus valley, and contains about 800 houses; 2, Pa-i-Khoja, which lies on the left bank of the Oxus, below the place where that river takes a bend to the west. It is distant from the Wamar circle a day's journey. It contains about 1000 houses, and its inhabitants are Khojas or descendants of Saiyads; they pay no taxes but are liable to military service in time of war; 3, Bartang, a province on a river of the same name. Five miles beyond Pigish on the right bank of the Pianja is the frontier village of Bar-Roshan. One day's journey beyond this again, and also on the right bank of the same river, is Vaznud the frontier village of Darwaz. Five marches from Vaznud is Kila-Khumb the chief town of Darwaz. The boundary between Shighnan and Darwaz is the water-shed lying at the head of the Wamar valley.

Beyond Darwaz it is said that the Khotlan country begins, the chief town of which is Kuliab.

Of Karatigen, which lies north of Darwaz, we have only hearsay information. It is comprised in the valley of the Surkhab and its sources, and is held to be perfectly independent. Once only was it subdued by the Olai-Kirghiz (Black Kirghiz) who nomadize on the slopes of the Kokan mountains. But the raiders were soon driven out, and since then the Karatigens have owned allegiance to none. Garm is the chief town of Karatigen. The villages, most of which are small, are scattered in separate groups over the Surkhab valley. Each has its own Beg, and bears the name of that village in which the Beg resides. The natural products are iron and rock salt, and also gold.

To the south of Karatigen and to the south-west of Darwaz lie Hissar and Kuliab. According to the information gained by the Hissar Expedition, Hissar is now divided into 7 Begships and Kuliab into two. The Hissar Begships are Shirabad, Baisun, Denan, Yurtchmisk, Hissar, Kurgan-Tube, and Kobadian. Kuliab comprises those of Baljuan and Kuliab, and also the amliakdars of Darband, Ssar-i-Iui, and Faizabad, who are appointed by the Amir himself. The amliakdars of the towns and villages are nominated by the Begs. Hissar and Kuliab produce in abundance all the sorts of grain and garden growth that are peculiar to Central Asia. Cotton is cultivated in large quantities only in the Begship of Shirabad because it is 'pos-

sible to export it thence *viâ* Guzar to Karshi. The carriage of such a bulky product from other parts of the country along the difficult mountain tracks would be attended with too much expense. From Denan Hissar and Du-Shamba grain and flax are exported to Bokhara, and from the village of Bash-khurd (43 miles from Guzar) the famous Guzar rock salt is exported. This salt gets as far as Tashkent where it is called Samarkand. From the entire country, even from Baljuan, Kuliab, and Afghánistán, sheep are driven to Bokhara and Karshi. Wood (the *archa* or dendroid juniper used for building purposes) is taken on mules to Guzar and Karshi from the mountains near Ak-Rabat. One mule load of *archa* wood is sold in Guzar for about 3s. For the transport of goods from the Hissar country to Karshi and Bokhara camels mules and horses are employed. There is not a cart throughout the whole Hissar country, indeed the word *arba* or cart is quite unknown there. Many parts of the country are rich in rock-salt. Mines of it are situated in the Mir-Tag mountains (at the mouth of the Waksh gorge). Hazrat Imam mountain too, near Kuliab, furnishes that town as well as Baljuan and even Badakshan with the same product. There are besides numerous salt springs.

Gold-washing is carried on in two places on the river Wakhsh, *viz.*, at the village of Dart-Kaul and close to Kurgan-Tube. The yield at the latter place is the more abundant. It is carried on by the natives after the fall of the spring floods when the auriferous sand is, so to speak, recharged with fresh deposits from the mountains.

3. *The Geography of India in the reign of Akbar.* Part II.—By JOHN BEAMES, Esq., C. S.

(Abstract.)

This is the second of the series of papers in which Mr. Beames proposes to reconstruct as far as practicable the map of the Moghul empire in the time of Akbar. The first series dealt with Subah Avadh (Oudh) and was published in abstract in the Proceedings of May 1884, and in full in Journal, Part I, No. 2 for the same year.

The present series treats of Subah Bihar, in reconstructing the details of which, great difficulties had to be encountered owing to the absence of earlier records, the falsification of the later ones by Muhammadan Subahdárs, and the Permanent Settlement of Lord Cornwallis, each in its way having contributed to efface the former political geography. According to Abul Fazl, Bihar was bounded on the east by Subah Bangálah (Bengal), on the west by Subah Ilahabad and Avadh, on the north and south by high mountains, evidently the Himalayas and Vin-dhyas respectively. The principal rivers are the Ganges, Son, and Gandak.

Todar Mal's settlement of 1582 lasted till 1685 when a fresh settlement was made, by which the revenue of the province was raised from fifty-five to eighty-five lacs. This settlement was superseded in 1750 by a fresh settlement, the details of which were carried out under the orders of Ali Vardi Khán, Subahdár of Bengal, by which the revenue was further raised to ninety-five and a half lacs.

The Subah of Bihar was divided into 7 Sarkárs, viz., 1, Bihár; 2, Múngir; 3, Champáran; 4, Hájpúr; 5, Sárán; 6, Tirhut; 7, Ruhtás. The reconstruction of the Subah, according to Mr. Beames, may be summarized as follows:—

I. *Sarkár Bihar*.—46 mehals or pergunnas; area 9,52,598 bighas. Revenue 8,019,639 dams nagdi, 22,70,147 sayurghals. Castes various: 2,150 horse; 67,310 foot.

This Sarkár occupies the whole of the modern districts of Patna and Gaya, the western half of the great plain of Magadha and certain tracts now included in the districts of Hazaribágh and Lohardaga in Chutia-Nagpur. It may be interesting to students of the science of language to note that the area of this Sarkár corresponds pretty accurately with the area of the modern Magadhi dialect, as shewn in the map prefixed to Part II of Mr. Grierson's Grammars of the Bihari language.

II. *Sarkár Múngir*.—31 mehals. Revenue 1,09,625,981½ dams. Castes various; 2,150 horse; 50,000 foot.

In this Sarkár, the first point noticeable is, that not a single mehal contains more than a statement of the revenue payable by it, there is no information as to area, ruling caste or anything else. This Sarkár runs far down south-eastwards into the jungly tracts now in the Santhal Pergunnahs, and it is impossible to fix the boundaries in that direction. In the north too, the vast areas of sparsely peopled swamps and marshes make it uncertain how far its boundary could be held to extend northwards.

III. *Sarkár Champáran*.—3 mehals. Area, 85,711 bigahs. Revenue 8,513,420 dams; 700 horse, 30,000 foot.

All the three mehals, Simranu, Mihsi, and Majhowa are still extant. Majhowa is a very large pargannah in the present day, stretching as far as Trebeni Ghát, the point where the Gandak issues from the hills, only a small portion of it is included in Todar Mal's rent-roll.

IV. *Sarkár Hájpúr*.—11 Mehals. Area 4,36,952 bigahs. Revenue, 27,331,030 dams. All these mehals are still extant and clearly identifiable. This Sarkár is a long and rather narrow strip comprising the tract between the Burh Gandak river on the north-east, and the Gandak and the Ganges on the south-west and south.

V. *Sarkár Sárán*.—17 mehals. Measured area 2,29,052 bigahs. Revenue 60,172,004½ dams. Castes various; 1000 horse, 50,000 foot.

This Sarkár like that of Champáran has no Havelí. In the present day sixteen out of Todar Mal's seventeen mehals are in existence, though some of the modern names differ slightly from those in the *Ain*.

VI. *Sarkár Tirhut*.—74 mehals. Measured area 266,464 bigahs. Revenue 19,189,777½ dams. Castes various; 700 horse, 80,000 foot.

Though this Sarkár contains a greater number of pargannas than others in Bihár, it covers less area than Sarkárs Bihár or Mungir, the pargannas being in many instances very small. This Sarkár is one of the most difficult to reconstruct, many changes having taken place, both in the names and arrangement of the pargannas, and large areas being absolutely unaccounted for.

VII. *Sarkár Ruhtás*.—18 mehals. Area 473,340 bigahs. Revenue 4,081,949 dams. Castes various; 4,550 horse, 162,000 foot.

This Sarkár is in the main conterminous with the modern district of Shahábád, being bounded on the north by the Ganges, on the east by the Son, on the west by the ill-omened Karamnásá, and on the south by the Kaimur range.

In conclusion, Mr. Beames remarks that the reconstruction of this Subah is far from being complete, and expresses a hope that here, as in the case of Subah Avadh, persons living on the spot may be able to clear up some of the doubtful points by local enquiry.

The paper will be published in full in Journal, Part I, for 1885.

LIBRARY.

The following additions have been made to the Library since the meeting held in July last.

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PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR NOVEMBER, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday, the 4th November, 1885, at 9 p. m.

The Hon. H. J. REYNOLDS, in the Chair.

The minutes of the last meeting were read and confirmed.

Several presentations were announced as detailed in the Library List appended.

The PRESIDENT reported that the following gentlemen were balloted for and elected ordinary members of the Society at the Meeting of Council of the 24th September last, in terms of Rule 7

1. Babu Damoodar Das Burman.
2. N. F. F. Smith, Esq., Manager, Estate Punnalal Seal.

The following gentlemen are candidates for election at the next meeting :—

As Ordinary Member :

C. L. Griesbach, Esq., F. G. S., proposed by H. B. Medlicott, Esq., F. R. S., seconded by J. Wood-Mason, Esq.

As Associate Member :

Dr. A. Führer, Curator of the Lucknow Museum and Assistant Archæological Surveyor, N. W. P. and Oudh, proposed by the Council.

Messrs. W. R. Lawrence, A. Thomson and A. Weekes have intimated their wish to withdraw from the Society.

The PRESIDENT reported that the Council of the Society had sanctioned the publication in the Bibliotheca Indica Series of Al Tabrizi's commentary to be edited by Mr. J. C. Lyall, in lieu of the Lamiyyat, which had been previously sanctioned.

Two letters were read from the Curator, Central Museum, Madras, forwarding 1, a specimen of a Nagri Gold Fanam found in the Nellore District, 2, an old Madras Gold Pagoda found in the same district and both acquired under the Treasure Trove Act.

The PHILOLOGICAL SECRETARY read the following Reports on nine finds of Coins, *viz.* :—

I. *Report on 1191 old coins sent by the Deputy Commissioner of Singhbhum, with his letter No. 779 of 6th January 1885,*
(*found at Chaibassa ?*)

1. The place where the coins were found is not mentioned, but they were forwarded from Chaibassa, in Singhbhum, Bengal Presidency.

2. They belong to the class commonly called "old Hindú punched coins." They are well-known and have been often described by Prinsep, Thomas and others (see *Indian Antiquary*, Vol. I, pp. 209 ff.). They are supposed to be the earliest kind of Indian coins, but probably were in use down to comparatively late times, side by side with more regular currencies. They consist of small flat pieces of metal of all kinds of shapes, marked with a great variety of "punches," some on one side only, others on both sides.

3. They are mostly of silver more or less pure (weight generally of about 4 annas), but a large portion in the present collection, on being tested, proved to be of some very base material, and many of them entirely crumbled away. The latter may have been forgeries.

4. They have been found very numerously all over India and are of little value.

II. *Report on a find of 94 pieces of copper coins forwarded by the Deputy Commissioner of Nimar, with his No. 2973, dated 23rd December, 1884.*

1. The find-place is the village of Kirala, Tahsíl Khandwa of the Nimár District. Date of find 2nd May, 1883.

2. The collection consists of 94 copper coins weighing about 2 pice each. They are of the following Muhammadan rulers of Gujarát.

No. of Specimens.

(1) VIII. Qutbu-d-dín Muzaffir Sháh bin Maḥmúd, 917—932 A. H.=1511—1525 A. D. Dates represented, 921 (2 specimens), 922 (2 sp.), 924 (1 sp.), 925 (6 sp.), 926 (3 sp.), 927 (3 sp.), 928 (5 sp.), 932 (2 sp.), illegible dates (4 sp.), bad (5 sp.); total,	...	...	...	...	33
(2) XI. Bahádur Sháh, 932—943 A. H.=1525—1536 A. D. Date represented, 935 (2 sp.), 9 (1 sp.), 940 (4 sp.), 943 (1 sp.), illegible date (1 sp.), total ...	...	...	...	...	9

	No. of Specimens.
(3) XIII. Násiru-d-dín Mahmúd III, bin Latíf Sháh, 944—961 A. H. = 1537—1553 A. D. Dates and mints appear to have been on the margin which is almost entirely worn away in every specimen, total,	51
(4) XV. Muzaffir Sháh III, 969—980 (P)=1561—1572 (P) Date [9]83, of doubtful identification, total,	1
Grand total,	94

III. *Report on 20 old silver coins, sent by the Deputy Commissioner of Nimár with his No. 586, of April 1885.*

1. Find-place defined as "this district," i. e., Nimár.
2. The collection comprises the following silver coins; all of the Moghul Dynasty of Delhi:—

	No. of Specimens.
1, V. Sháh Jehán, 1037—1068 = 1627—1658; date: [1059], 22; Mint P	1
2, VI. Aurangzib, 1068—1118 = 1658—1707; dates: 1096, 29—1104, 36—1073, 5; Mint, Súrat	3
3, do. do.; dates: 1109, 41—1116, 48—1118, 50; Mint Sháh Jáhánábád	3
4, VIII. Bahádur Sháh, 1118—1124 = 1707—1712; date: [1118], 1, Mint Lakhnau	1
5, IX. Jehándár Sháh, 1124—1712; date: [1124], 1; Mint, Súrat	1
6, X. Farokhsír, 1124—1131 = 1712—1719; dates: 1128, 5—11—[1127], 4	3
7, XI. Rafi-u-d-darjât, 1131—1719; date: [1131], 1; Mint: Dár ul Khiláfat Sháh Jehánábád	1
8, XIII. Muḥammad Sháh, 1131—1161 = 1719—1748; date: 1142, 12; Mint: Korá	1
9, do. Muḥammad Sháh, 1131—1161 = 1719—1748; date: 1140, 10, Mint Súrat	1
10, do. do.; date: 1141, 11; Mint, Sháh Jehánábád	1
11, do. do.: date; 11[41], 11; Mint, Etáwah	1
12, do. do.: date; 113[5], 5, Mint: Dár ul Khiláfat, Sháh Jehánábád	1
13, do. do.: date; 11[31], 1; Mint: Murshidábád	1
14, do. do.: date; 1[143], 14; Mint: illegible	1
Total,	20

They cover a period of 84 years, from 1059—1143 A. H.

IV. Report on 40 silver coins, forwarded by the Deputy Commissioner of Raipur, with his No. 2126 of the 30th April, 1885.

1. The coins were found in Mouzah Biranpur, in the Gaudai Zemindari of the Raipur District, and number forty.
2. They belong to the following Moghul Emperors of Delhi :

	No. of specimens.
1, VI. <i>Aurangzib Alamgir</i> , A. H. 1068—1118=A. D. 1658—1707 ; two bad specimens, with mint and date illegible ...	2
2, IX. <i>Jehandár Sháh</i> , A. H. 1124 = A. D. 1712, Mint : Súrat ; Date [1124], regnal 1 ...	1
3, X. <i>Farrukhsír</i> , A. H. 1124—1131=A. D. 1712—1719 ; Mint : Mustaqir ul Khiláfat, Akbarábád, date 1131, 7 ...	1
4, XIII. <i>Muhammad Sháh</i> , A. H. 1131—1161=A. D. 1719—1748 ;	
a, Mint : Kotah, 4 specimens, dates (regnal) 6, 14, 27, 28 ;	
b, Mint : Murshidábád, 6 spec., dates (regnal) 2, 15, 16, 19 bis, 26	
c, Mint : Azímábád, 10 spec., dates 1153, 22—115[9], 28—115[8], 27—?, 7—?, 19—?, 26 tris,—?, 30 bis.	
d, Mint : Dár ul Khiláfat Akbarábád, 1 spec., date 1154, 23	
e, Mint : Dár ul Khiláfat, Sháh Jehánábád, 1 spec., date [1131], 1	
f, Mint : Dár ul Khiláfat, Sháh Jehanábád, another type with Sáhib Qírán Zání, 1 spec., date 113[9], 8 ; Total, ...	23
5, XIV. <i>Ahmed Sháh Bahádur</i> , A. H. 1161—1167=A. D. 1748—1754 ;	
a, Mint : Banáras, 2 spec., dates 1166, 5 bis.	
b, Mint : Murshidábád, 1 spec., date ?, 3	
c, Mint : Súrat, 2 spec., dates [11]61, 1—[116]7, 6 Total, ...	5
6, XV. <i>Alamgir Zání</i> , A. H. 1167—1175=A. D. 1754—1761 ;	
a, Mint : Banáras, 2 spec., dates 11[70], 3—[1172], 5	
b, Mint : Etáwah, 2 spec., dates 116[9], 2—[1110], 3	
c, Mint : Patna, 1 spec., date [1173], 6 Total, ...	5
7, XVI. <i>Sháh Alam</i> , A. H. 1175—A. D. 1761	
a, Mint : Banáras, 1 spec., date 1174, 1	
b, Mint : Etáwah, 1 spec., date [1174], 1	
c, Mint : Patna, 1 spec., date 1174, 2 ; Total, ...	3
	Total, ... 40

V. *Report on two old Silver coins forwarded by the First Asst. Agent to Govr.-Genl., Rajputána, with his No. 1241 G of 20th May 1885.*

1. The find-place is not stated. Apparently in the neighbourhood of Abú.
2. One of the coins is a so-called "Pathan" coin, viz., of Alá-u-d-dín, Muḥammad Sháh, Sultan of Delhi, the XIVth of the so-called "Pathan" kings of Delhi, from A. H. 695—715 = A. D. 1295—1315. The margin which contained mint and date is worn away. The coin is well known, and described in E. Thomas' *Chronicles of the Pathan kings of Delhi*, p. 171, No. 132 (Plate III, No. 57) 1
3. The other coin is a "Mughal" coin, viz., one of Sultan Jehangír Sháh, son of Akbar Sháh, A. H. 1014—1037 = A. D. 1605—1627. It bears date 1027, the 12th year of his reign ... 1

VI. *Report on five ancient coins forwarded by the Deputy Commissioner of Gurdaspur with his No. 619, of the 28th May 1885.*

1. The coins were found in the district of Gurdaspur. The locality is not further specified. They number five.

2. Their age and attribution is still uncertain. They bear, however, a rude resemblance to the coins of Samudra Gupta, of the old imperial Gupta family, who reigned in the 3rd century A. D. They have been described by Prinsep in his *Indian Antiquities* (ed. E. Thomas) Vol. I, pp. 227 (Plate XXII, fig. 13).

OBVERSE. Standing figure of king with some letters arranged perpendicularly (Chinese fashion), under his arm *Keda*, near the left margin *Kapa*, near the right margin *Sha*.

REVERSE. Figure of a goddess (Lakshmi?) seated on a throne.

3. They are of mixed metal, some kind of debased gold (electrum;) their numismatic value is about Rs. 5 each.

VII. *Report on an ancient gold coin forwarded by the Collector of Bhagalpur with his No. 757, G, dated 24th June 1885.*

1. The find-place is not stated. It is very desirable to have precise information on this point, especially in the case of gold and silver coins.

2. The coin is an Indo-Scythian one; it is usually ascribed to Vasu Deva, about the end of the 2nd century A. D. It has been described by Prinsep in his *Indian Antiquities* (ed. Thomas) Vol. I, p. 227 (Plate XXII, fig. 4), also by H. H. Wilson in the *Ariana Antiqua*, p. 378 (Plate XIV, figs. 12, 13, 14) Coins of this kind are rare and valuable. Their numismatic value is about Rs. 20; intrinsic about Rs. 13.

VIII. Report on 346 old copper coins forwarded by the Deputy Commissioner of Gujrat with his No. 1061, dated 4th August 1885.

1. They were found buried at Mauza Basli, Tahsil Kharan, Gujrat District. They number 346 and are all of copper.

2. They are all coins of Sultan SIKANDAR SHÁH, son of Sultan Bahlol Sháh, of the House Lodí, who sat on the throne of Delhi from A. H. 894—923, or A. D. 1488—1517. They are of two very slightly differing varieties; the difference consisting merely in the type of the letters. They are well-known, and described and figured by E. Thomas in his *Chronicles of the Pathan Kings of Delhi*, No. 316, p. 366, plate V, fig. 167. The following regnal years are represented in the collection :

A. H. 895, specimens	1	A. H. 913, specimens	6
" 896, "	1	" 914, "	6
" 897, "	2	" 915, "	10
" 898, "	5	" 916, "	6
" 899, "	3	" 917, "	10
" 900, "	3	" 918, "	11
" 901, "	1	" 919, "	11
" 902, "	2	" 920, "	1
" 903, "	2	Brought over 29	
" 906, "	2		
" 907, "	2	Total, ... 90	
" 908, "	2		
" 910, "	3		

Total, ... 29

Specimens with clear dates 90

" " imperfect " 99

" " illegible " 115

" sticking together, 51

Total, ... 346

IX. Report on 232 old copper coins forwarded by the Offg. Deputy Commissioner of Seoni, Central Provinces, with his No. 1759, dated Seoni 2nd July 1885.

1. The find-place of the coins is not specified. They number 232, are of copper, and in very bad condition.

2. Owing to the bad condition of the coins I have found great difficulty in identifying them. Not less than 182 among them are so much worn as now to present entirely smooth surfaces, with no trace

whatsoever of any inscription. Some 24 still show traces of letters on one or both sides, but not sufficient to be readable. The remaining 26 show more or less distinct traces of their dates and mints. From these I have been able to ascertain, that their mint town is *Dār us Saltanat Shāh Jehānābād*, i. e., Delhi, and that their dates are the following:

17 specimens are dated 1068 A. H. = 1857-58 A. D.

1 " " 1075 " = 1664-65 A. D.

3 " " 1075 " = 1664-65 A. D.

The Mughal Emperor Shāh Jehān of Delhi reigned up to the year 1068 A. H., while his son and successor Aurangzeb reigned from 1068-1118 A. H. The earlier specimens of 1068 might therefore belong to Shāh Jehān; but they might also belong to Aurangzeb. On the other hand, the traces which remain of the emperor's name, though too imperfect to be decipherable, seem to be alike on all the coins; and as all the ascertained dates agree with Aurangzeb's reign, I conclude that they must all be ascribed to that emperor of Delhi.

The following papers were read:

1. *Notes on Indian Rhynchota*, No. 5.—By E. F. T. ATKINSON, ESQ.
(Abstract.)

This paper which is the fifth and final instalment of the author's notes on the Homopterous section of the Indian Rhynchota, comprises 140 species of Fulgoridæ distributed among the following genera: *Eurybrachys* 10; *Messena* 2; *Thessitus* 3; *Loxocephala* 2; *Nesis* 2; *Frutis* 1; *Diochoptera* 1; *Metaurus* 1; *Anagnia* 1; *Centromeria*, 1, *Dictyophara* 10; *Cixius* 3; *Oliarus*, 2; *Briasia* 1; *Benna*, 1; *Hygyops*, 2; *Faventia*, 1; *Helicoptera*, 1; *Daradax*, 1; *Tropiduchus*, 1; *Elica*, 1; *Monopsis*, 2; *Hiracia* 1; *Phenice* 2; *Lacusa* 1; *Corethrura* 1; *Hemisphærius* 1; *Flavina* 1; *Eupilis*, 1; *Tempsa*, 1; *Tetrica* 1; *Issus*, 2; *Oyrene* 2; *Ricania* 26; *Miriza*, 1; *Mindura*, 1; *Pucina* 1; *Oerynia* 1; *Scarpanta* 1; *Phromnia* 5; *Lechæa* 1; *Flata*, 22; *Seliza* 4; *Flatoides* 5; *Atracis*, 1; *Copsyrna*, 1; *Nephesa*, 1; *Pæciloptern*, 2. In the addenda to the paper Mr. Atkinson has given the description of or notes on 73 species of which the names and synonymy alone were given in previous papers and has added 55 species not noticed before, making a total of Cicavidæ, 115; Cercopidæ, 70; Membracidæ, 29; Jassidæ, 38 and Fulgoridæ, 202 or a grand total of 454 species of recorded Homoptera. Indications are given of species recorded from neighbouring countries which raise the record to about 500 known species.

At the conclusion of the paper, Mr. Atkinson said:

The paper just read completes the account of the recorded species of insects belonging to the Homopterous section of the Indian Rhynchota.

It is not my intention at present to deal with the sub-orders *Phytophthires* and *Anoplura*, the former including the *Psyllidæ*, *Coccidæ*, &c., as the recorded species are few and of little value, and it will be better, should time and opportunity permit, to undertake original investigations of these sections in which India is so rich in species. My object in these papers has been to lay the foundations of a '*Homoptera Indica*' by collecting all the information at present available and above all to clear the synonymy which is full of so many pit-falls and troubles for the beginner. I felt that it was useless to attempt to enlist the sympathies of observers on behalf of this interesting order of insects, unless some substantial aid was given them to enable them to take an intelligent interest in the work. For this purpose I have given the original descriptions of each Indian insect wherever possible or where Stål, Signoret, Distant or Butler have re-described an insect, their descriptions. In a few cases I have re-described the type, but this is so far a work of doubt that I have preferred to give the original description only, however meagre, until I have had an opportunity of visiting Europe and seeing the actual types themselves. The work so far as I have gone is merely preparatory to a truly useful work on the Indian Homoptera, and I trust that I have done enough to enlist the aid of all lovers of Natural History in India to collect materials for the purpose. I am prepared to do all I can towards naming any collections sent for that purpose to me at 43 Park Street, Calcutta. I would suggest that all new and unnamed or unrecognized specimens be deposited in the Indian Museum until arrangements can be made for their being sent to Europe for identification, and further I shall be happy to furnish instructions for the collection and preservation of specimens in the meantime. In the section *Homoptera* are included the cicadæ whose shrill song is so well-known, the beautiful lantern-flies with their long cephalic process, the cicadinæ, the plant-lice including that which yields the lac-dye and lac of commerce, and the majority of the myriads of insects which one can see flying about the street lamps at the close of the rains. Not one in fifty of these latter has as yet been described, and I can promise any one who chooses to take up this order plenty of novelties and plenty of amusement. In the section *Heteroptera* are included those insects which live on vegetable juices and are found on land or in water, in the latter element skipping over the surface or swimming. Many of them are beautifully coloured and vie with all other orders in the richness of their clothing and the quaintness of their forms. As this is the first attempt at reviewing the recorded knowledge of our Indian *Homoptera* there must be many omissions but no trouble has been spared to make the record perfect. Nearly all the English, French, German, Swedish, Italian and Russian publications of the various Entomological

Societies have been examined, and it is believed that the omissions will prove to be of no great importance. I have added some species hitherto recorded only from Singapore and Siam when their occurrence in India is probable. Those acquainted with the order can alone appreciate the labour involved and value it, a labour enhanced by the absolute absence of any named collection in India. I have arranged as far as possible the collection in the Indian Museum, Calcutta, and this will always remain available for consultation by collectors. It is desirable, however, that fresh efforts should be made to increase that collection which is particularly deficient in *Rhynchota* and does not possess one-fourth of the named species.

2. *The Currents and Tides of the Hooghly and its littoral, and how they are influenced.*—By S. R. ELSON, Esq.

About twenty miles, or more, to the eastward of the entrance channels to the Mutlah River, and fifty to the eastward of the Hooghly River, lies the northern end, or termination, of a peculiar deep gut of water, named the 'Swatch of no Ground': where the delta sand-banks end so very abruptly as to launch suddenly from seven into one hundred fathoms, in the course of only three or four miles: and the depth is 300 fathoms at only 15 miles from the shore.

This gut, if I may be allowed the expression, is, doubtless, the sub-way, or aqueduct, for the conveyance, between the walls of the adjacent raised sea bottom, of the cooler and dense briny current which, all authorities show, runs up from S. W. to N. E. parallel with the Coromandel Coast for at least eight months of the year,* and which continues onwards, as a sure convection current, towards the sun-warmed shoal waters of the extensive submarine Ganges delta: thereby preventing the river silt from settling so far seaward as it has done both east and west of the head of the Swatch: even supposing that there is such a great outpour of water from the northern rivers during the freshets as some aver, but on which point there is, unquestionably, a doubt.

At its head, the waters the Swatch pours forth seem to divide, the main part running eastward towards Chittagong, and then down along the Arracan Coast, at least so say some of the sea-directories. But a great portion of this stream of water, and that which most concerns us, turns westwards over the remarkably well-formed submarine sand dunes (alone to be found to the westward of the Swatch of no Ground) stretching out for more than thirty miles from dry land, and lying between the Bulchery sand on the east and Balasore Roads on the west. In proof of which statements, we have it from registers (kept on board the outer Light Vessels

* See Blanford's Rudiments of Physical Geography.

and courteously placed at my disposal by the Port Officer, Captain Stiffe, I. M.) of currents, that the mean daily set of the sea for the year 1880 was, at the Mutlah Light Vessel, 12.1 miles W. $\frac{3}{4}$ S., and, at the Eastern Channel Light, only one-half, or 6.4 miles in a S. W. by W. $\frac{3}{4}$ W. direction; whilst at the Pilots' Ridge, 32 miles W. S. W. of the latter, it was really an inset of the sea of $\frac{2}{3}$ of a mile N. W. $\frac{1}{4}$ W. *per diem*, during the six months, March to September, that she was in position.

Besides the natural tendency of the waters of the Hooghly littoral to flow round over the sands cyclonically, or against the hands of the watch (face upwards), all the year round, any small baric depression out over the Bay is quite sufficient to hurry it along with great force; so that it is a well-known fact that a large westward set at the Pilot Station, Sandheads, is a sure precursor of a cyclonic storm of greater or less intensity; this set showing itself long before the indraughted N. E. wind has gained sufficient force to cause it by friction with the sea-surface; doubtless, this deep gut, so handy to draw upon, furnishes a ready supply of northwards moving water, as required by the demand of a reduced or diminished aerial pressure on its left front: as flow also the responsive and light, but much more sluggish, air strata above it: a vibration of energy being taken up and translated by a water medium four and a quarter times more surely and speedily than by an air medium.

On the other hand, when such local meteorological conditions of an anti-cyclonic character occur as take place at the head of the Bay during the months of March, April, and May, (when strong S. S. W. and S. W. winds blow, and an eastward set of the sea is begot), such eastward set at the Mutlah Light is as nothing compared to that at the Eastern Channel Light; and even here, is scarcely ever more than 12 miles in the 24 hours, and, then, only on extraordinary occasions, when a S. W. gale and high sea call it forth (*see* Table of Sea-set at Sandheads in author's Sandheads Sailing Directory).

This deep gut of (doubtless running) water, this Swatch of no Ground, has also another influence not yet written about, that is, in giving a greater range to the tides in the Mutlah River of 3 feet 6 inches over those of the Hooghly River: these waters being so close-to are ever ready to swing and pulsate, to flow and ebb, in response to the disturbed equilibrium caused by the constantly varying attractions of sun and moon on land and sea areas: whilst the Hooghly has to draw upon a more distant reservoir wherewith to build up her tidal wave, and to which also to return the uprisen waters after the Hooghly meridian has rolled away eastwards from under the lunar and solar perturbing influences. I have been told by the captains of the Light Vessels who have had experience there, that there is a much stronger current

in and off the Mutlah than in and off the Hooghly. And if my memory serves me rightly, I remember there were not a few vessels lost in the Mutlah during the short period it was open as a port; their loss pointing to a stronger current making navigation of the Mutlah at least as dangerous, if not more so, than that of the Hooghly: all which I think may be safely attributed to its proximity to the Swatch of no Ground, the probable birthplace of the 'tide-rips' we experience throughout the Sandheads about September and October.

In all old directories for the Bay sailors are taught, that the tides at the Sandheads, in fact, all over the littoral, flow regularly round, and with equal force, like the hands of a watch (face upwards): this is an error which it is desirable should be corrected; for I find that but very little water runs to the eastward of north and south-south-east, and that for not more than an hour or so, at the turn of the tide from flood to ebb; all the rest going to the westward over the outlying reefs and sands, whose characteristics as well-formed sand dunes prove this westward set, if no other proofs were available for the purpose.

All the water from the Hooghly goes towards Balasore Roads in a S. W. direction from the mouth of the river. This large shallow basin, 40 miles in diameter, with an average depth of 7 to 8 fathoms of muddy, warmed water, may, with all propriety, be called the settling tank and evaporating pool for the annual 78,000,000 yards of solid silt deposit said to be brought down by the Hooghly waters. Muddy water is scarcely ever to be seen at the Ridge Light Station, excepting on spring tides, and when the sea is much agitated; and, as before stated, the mean daily set of the sea at that station is for the six months, March to September, only $\frac{2}{3}$ of a mile in a N. W. $\frac{1}{4}$ W. direction.

Although, at first sight, the general trend of the outlying reefs and sands to the S. S. E. seems to point to the currents setting in that direction, yet, in reality, they do not so set, and, doubtless, their S. S. E. direction is the result of the combination of three causes:—the proven almost constant westward set of the waters over them: the transporting, upheaving effect of the almost as constant sea swell from the S. and S. S. W.: also the disturbance caused by the warmed and, in the freshets, purer ebb waters meeting the above-mentioned constant westward set of cooler and denser water. Both currents in seeking equilibrium roll over and over each other as the tidal stream runs down the steep western edges of the sands, until the 10 fathom line is reached, where the upheaving wave power suddenly ceases, and the hard sand deposits as suddenly halt.

Close to the western edges of all the sands of the littoral, the

bottom is of a very soft blue clay, with a tenacious substratum which holds the sounding lead much too firmly, sometimes with such tenacity as to break the line.

But the eastern edges of the whole of them shelve very gradually, and consist of hard, fine sand such as is found high up in the Hooghly. This fine sand has, in very disturbed states of the sea, been deposited on the rigging of vessels, when these have been in from 12 to 15 fathoms of water, shining, when dry, like particles of steel filings.

As elsewhere, the tides of the Hooghly seem to be very much influenced by varying conditions of relative baric pressure over sea and land areas: both diurnal, when, in the afternoon, within 100 miles of land, the sea area has the superior pressure and *vice versâ* in the forenoon: and yearly or as termed in the tide tables, 'seasonal,' when, from October (as Mr. Blanford tells us, 'the land area is suddenly transformed into a region of high pressure') to March, the pressure is higher to the north than to the south, and *vice versâ*, when, the sea area becoming the seat of highest pressure, southerly winds as a necessary result, predominate, and raise a high swell at the Sandheads: this swell becoming more agitated in the shoal water of the estuary is, of itself, doubtless, a cause of the waters of the river standing higher; but, taken in conjunction with the steepened baric gradient and southerly wind, the mean level of the water in the river rises steadily till the advent of the lighter fresh water in the rains, when it stands higher still, or about four feet higher in September than in January and February, when salt or brackish water reaches far up the river. (In June of this year, immediately before the freshets had set down, I found five and a half grains at low, and five and three quarter grains of salt per ounce troy at high water, at Diamond Harbour.)

Any abnormal state of the usual relative baric pressure causes a corresponding disturbance in the predicted regularity of the tides, both in times and heights of low and high water: the water, as above-mentioned, responding to the altered baric gradient before the air has time to do so, much less to raise waves outside, which, of themselves, are known to augment, or exalt, the calm mean sea level.

From low to high water, in the whole of the river, is a little more than five hours; and from high to low water a little more than seven hours: but the flowing and ebbing of the water is greatly influenced by the strength of the freshets, and the distance from the sea: so that at Calcutta, in the month of September, vessels in the neap-tides, do not swing to the flood: and, owing to an extraordinary freshet this year, vessels did not swing flood in the height of a perigee spring tide; but this masking of the flood stream does not affect the rise and fall of the tide, which goes on all the same as the tide tables predict.

The difference in the times of low water between any two places on the river is generally equivalent to half the difference of high water between the two places added to the difference of the said high water.

For instance, the difference between the times of high water at Calcutta and Mud Point is three hours; and that between the time of low water is about four and a half hours.

3. *On the Antiquity, Authenticity and Genuineness of Chand Bardái's Epic, the "Prithirāj Rasau."*—By KAVIRAJ SHYAMAL DAS, M. R. A. S., Poet Laureate and Member of the Royal Council, Meywar.

(Abstract.)

The object of the author of this paper is to demonstrate that the well-known epic of Chand Bardái, the Prithirāj Rasau is not genuine, but was fabricated several centuries after by a bard of Rajpútáná. This position he endeavours to establish by quotations from the poem itself, showing that they abound with expressions commonly used in the dialect of that province and not found in the Braj Bháshá or any other Eastern dialect of India. The author then refers to several stone inscriptions found in Meywar which all contribute to confirm the position taken up by him. He concludes by stating that his object in writing the paper is to caution the public against the belief that the poem was written by Chand Bardái, or even by any author who was his contemporary. The spuriousness of the Rasau, he adds, is confirmed by the fact that its narrative and the names of persons mentioned and the dates given do not agree with those in the Persian works of Prithirāj's time.

At the conclusion of the paper, which will be published in full in Journal, Part I., DR. HOENLE remarked, that from the brief perusal which he had been able to give to the Kavirāja's paper, it seemed to him that it was likely to prove of considerable interest and importance. The question of the genuineness and credibility of the epic of Chand was one which deserved careful consideration. He did not feel sure regarding the cogency of the author's argument from the Rajpútání language of the Epic. There was no good reason why the language of the real Chand should be supposed to have been Braj Bháshá or any other Eastern dialect of India. The argument from the disagreement of the dates given in the epic from those given in Persian historical works was far more apposite. The fact of the existence of this disagreement had been long since pointed out; though hitherto it had not been satisfactorily accounted for. The peculiar point, requiring explanation, seemed to him to be this, that the dates of the epic, while smaller by about 90 years than those given elsewhere, were consistent with one another. The most important of the Kavirāja's arguments, however, were undoubtedly

those, which were intended to identify certain events related in the epic with occurrences that happened in the history of Rájputáná and Gujarát several centuries after the time when the real bard Chand was known to have lived. If these identifications could be satisfactorily established—as the Kavirája seemed to have done,—they would certainly prove, that, if not the whole epic, at least certain large portions of it were not genuine. With regard to this point, Dr. Hoernle said, he might briefly state what his own conclusions were. In connexion with the edition of the epic, which was being prepared for the Society, he had occasion carefully to examine and compare the available manuscripts. These seemed to disclose clear evidence that the epic had undergone, in the course of time, three distinct revisions or recensions. At the time of each of these revisions, large new portions, being sometimes entire cantos, were added to the poem. He thought it might possibly be shown, in the course of further investigation, that those events which did not take place so early as Chand's time, were recorded in the cantos subsequently added to the original and genuine epic. For the present, he was not disposed to give credence to such a sweeping statement that the whole of the poem was a forgery dating from so late a date as the 15th or 16th century.

4. *On some copper coins of Akbar found in the Kángra District.*—By E. E. OLIVER, M. G. C. E. (With 2 plates.)

(Abstract.)

This paper contains a description given by Mr. E. E. Oliver of a parcel of copper coins of Akbar, about 30 in number, which the author obtained from a Baniyá in the Kángra Valley. Though struck at widely distant places and considerably differing in date they were all in an excellent state of preservation. Most of the mints, 28 in all, were new to Mr. Oliver; and one curious circumstance which he notes in connexion with this find is that it includes specimens of the whole twelve Persian months, in many cases of several mints.

The paper with 2 plates, will be published in full in *Journal*, Part I.

5. *On the Corrosion of the lead-lining of Indian Tea-Chests.*—By ALEXANDER PEDLER, Esq., F. C. S.

(Abstract.)

In this paper Mr. Pedler gives an account of numerous experiments which he made at the request of the Indian Tea Association to ascertain the cause of the partial corrosion and in some instances total destruction of the lead-linings of tea chests. The experiments made, and the results given by them are very interesting, and the paper will be published in

PROCEEDINGS
OF THE
ASIATIC SOCIETY OF BENGAL,
FOR DECEMBER, 1885.

The Monthly General Meeting of the Asiatic Society of Bengal was held on Wednesday the 2nd December, 1885, at 9 P. M.

D. WALDIE, Esq., F. C. S. Vice-President in the Chair.

The minutes of the last meeting were read and confirmed.

Several presentations were announced, as detailed in the Library List appended.

The following gentlemen proposed and seconded at last meeting were ballotted for and elected :

As ordinary Member,

C. L. Griesbach, Esq., Depy. Supt., Geological Survey of India.

As Associate Member,

Dr. A. Fuhrer, Curator, Lucknow Museum, and Asstt. Archæological Surveyor, N. W. P. and Oudh.

The following gentlemen are candidates for election at next meeting,

1. A. R. Elson, Esq., proposed by J. Wood-Mason, Esq., seconded by H. B. Medlicott, Esq.

2. Colonel W. B. Thomson, B. S. C., proposed by R. A. Sterndale, Esq., seconded by F. E. Pargiter, Esq.

3. Francis Carnac Barnes, Esq., Private Secretary to H. H. the Lieutenant-Governor, proposed by E. T. Atkinson, Esq., seconded by E. Gay, Esq.

4. Saiyad Mohamad Latif Khan, Extra Assistant Commissioner, Dera Gazi Khan, proposed by D. G. Barkley, Esq., seconded by Denzil Ibbetson, Esq.

The PRESIDENT reported that the undermentioned gentlemen were largely in arrears of subscription, and, though registered letters had been sent to them in accordance with Rule 37, no notice had been taken of them. Their names would therefore be suspended for a month as defaulters in the Society's Meeting Room, and, unless the sums due were paid in the meantime, they would be declared removed from the Society's Member List at the next meeting. In accordance with Rule 38, this fact is notified in the Proceedings.

1. T. Blissett, Esq.
2. Babu Bhairub Chunder Chatterji.
3. Capt. L. A. C. Cook.
4. Babu Sib Chunder Nag.
5. „ Protap Narain Sing.
6. J. C. Rees, Esq.
7. G. R. C. Williams, Esq.

Babu Binod Behary Mullik intimated his wish to withdraw from the Society.

The PHILOLOGICAL SECRETARY read 3 Reports on as many finds of old coins.

I. Report on 15 old uncurrent silver coins, forwarded by the Secretary to the Chief Commissioner of Assam, with his No. 1272, dated 29th July 1885.

1. The find place is not distinctly stated, but appears to have been Lakhimpur. The coins number 15 and are all of silver. Thirteen of them belong to Moghul Sultans of Delhi, the remaining two are of Assamese Rájás.

2. The Moghul coins are the following :

	No. of Specimens.
1, V, <i>Sháh Jehán</i> , A. H. 1037—1068 = A. D. 1627—1658; mint and date illegible; reign 13; bad specimen	1
2, VI, <i>Aurangzib</i> , A. H. 1064—1118 = A. D. 1658—1707;	
<i>a</i> , mint, Súrat, date 1095, reign 27	1
<i>b</i> , "Golkonda;" date [1074], reign 6	1
<i>c</i> , mint Jehánnagar; date 1102, reign 34 ..	1
<i>d</i> , illegible; illegible	1
	— 4
3, XIII, <i>Muhammad Sháh</i> , A. H. 1131—1161 = A. D. 1719—1748,	
<i>a</i> , mint Arkot, dates illegible	5
<i>b</i> , mint Jehángirábád; date 1145, reign 15	1
	— 6

		No. of Specimens.
4, XIV,	<i>Ahmed Sháh Bahádur</i> , A. H. 1161—1167 = A. D. 1748—1754; mint Arkot, date illegible	1
5, XV,	<i>Azizuddin Muḥammad</i> , <i>Alamgír II</i> , A. H. 1167—1175 = A. D. 1754—1761; mint Arkot, date illegible	1
Total ...		13
3. The Assamese coins are the following :		
6, IX,	<i>Svarga Deva Pramatta Sinha</i> , Sáka 1660—1662 = A. D. 1738—1750 : date 1664; octagonal	1
7, XI,	<i>Svarga Deva Lakshmí Sinha</i> , Sáka 1693—1706 = A. D. 1771—1784; date 1697; octagonal :	1
Total ...		2
Grand total ...		15

II. Report on 227 old gold coins, forwarded by the Deputy Commissioner of Hissar, with his No. 1155, dated 18th August 1885.

1. The find place is not stated. Exact information on this head is always desirable.

2. The coins number 227, all of gold, and all of Emperor Akbar's mints; and of various types : *viz.*,

		No. of Specimens.
1, TYPE,	figured in Marsden's <i>Numismata Orientalia</i> , Plate XXXIX, No. DCCCXIII, with two beaded, oblong and square, areas.	
a,	mint <i>Ahmadábád</i> , dates 981 ¹ , 982 ¹⁰ , 984 ¹	12
b,	„ <i>Dár ul Khiláfat Agra</i> , dates 981 ³ , 982 ¹⁵ , 983 ⁹ , 984 ¹ ,	28
c,	„ <i>illegible</i> ; dates 982 ¹ , 983 ¹⁹ , 984 ²⁴ , 985 ¹	45
d,	„ <i>Patna</i> , date 984 ¹	1
2, TYPE,	figured in Marsden's <i>Numismata Orientalia</i> , plate XXXIX, No. DCCCIV, with two straight-lined, oblong and round, areas :	
a,	mint <i>Ahmadábád</i> , dates 980 ¹⁰ , 981 ¹⁰	20
b,	„ <i>Dár ul Khiláfat Agra</i> , date 976 ⁷ , 977 ⁵ , 978 ³ , 979 ⁴ , 980 ⁴	23

		No. of Specimens.
c, mint	Agra (with Sultán al Azam) dates 971 ¹⁰ , 972 ⁵ , 973 ² , 974 ⁴ , 975 ⁸	27
d, „	Hasrat Dehli, dates 977 ⁶ , 978 ¹ , 979 ¹	8
e, „	Hasrat Dehli, (with Sultán al Azam) dates 972 ² , 973 ¹ , 975 ⁴ , 976 ¹ , 979 ¹	9
f, „	Dár ul Khiláfat Láhor, dates 976 ² , 977 ⁵ , 972 ¹ , 973 ³	11
g, „	Láhor (with Sultán al Azam), dates 975 ³ , 976 ² , 977 ⁴ , 978 ¹ , 979 ¹	11
h, „	illegible, dates 980 ³ , 981 ⁴ , 983 ³ ...	10
3, TYPE, not fig. in Marsden, with one straight-lined oblong and one scalloped round area.		
a, Mint Láhor (with Sultán al Azam),	dates 970 ⁸ , 973 ² , 974 ³ , 976 ⁴	13
4, TYPE, not fig. in Marsden, with one straight-lined oblong and one double scalloped area :		
a, mint Láhor, (with Sultán al Azam), date	971 ⁵	5
5, TYPE, not fig. in Marsden, with two straight-lined, oblong and square, areas :		
a, mint Dár us Saltanat Ahmadábád, date	981 ²	2
6, TYPE, not fig. in Marsden, with one arched oblong and one round area :		
mint Jannpur, date	972	1
7, TYPE, not in Marsden ; lettered surfaces ;		
mint (camp), date	984	1
Grand Total, ...		227

The value of the coins is, intrinsic Rs. 18-12-0 each, and numismatic Rs. 22 each.

III. Report on 176 old silver coins forwarded by the Deputy Commissioner of Hissar, with his No. 1192, dated 29th August, 1885.

1. They are stated to have been found in the Hissar District. They number 176, and all are (silver) rupees.

2. They belong to the following Moghul sovereigns of Delhi :

1, VI. Aurangzib, A. H. 1068—1118 = A. D. 1658—1707, mint Mustaqir ul Khiláfat Akbarábád, dates 1113, 1117 ; reigns 45, 49, 37

3

	No. of Specimens.
2, VIII. <i>Bahádur Sháh</i> , A. H. 1118—1124 = A. D. 1707—1712; mint illegible, date 1122.	1
3, X. <i>Farrokh Sír</i> , A. H. 1124—1131 = A. D. 1712—1719, mint Dár us Salṭanat Láhor; date [1130], reign 7	1
4, XIII. <i>Muḥammad Sháh</i> A. H. 1131—1161 = 1719—1748; mint Dár ul Khiláfat Sháh Jahánábád; dates various; two varieties of the "Sáhib Qirán" type of coins: viz.	
<i>a</i> , with date in top line	104
<i>b</i> , with date in middle line	16
5, XIV. <i>Aḥmad Sháh</i> , A. H. 1161—1167 = A. D. 1748—1754; mint Dár ul Khiláfat Sháh Jahánábád; dates various	37
6, XV. <i>Alamgír Zání Azíz ud dín</i> , A. H. 1167—1175 = A. D. 1754—1761, two different types of coin: viz.,	
<i>a</i> , "Azíz ud dín" type, mint Sháh Jahánábád, dates 1169, 1170, 1173	8
<i>b</i> , Alamgír type, mints Sháh Jehánábád, Láhor and Akbárábád, date 1171	6
	14
Total, ...	176

3. The intrinsic value of the coins is about one Rupee each; the numismatic, from Rs. 1-4 to Rs. 2, according to the age.

The PHILOLOGICAL SECRETARY read a letter from Mr. Growse on a Hindú coin found at Kútiya.

"I am sending you a silver coin from Kútiya, on the Ganges, in the Fatehpore district, where I was encamped yesterday. Gen. Cunningham (Survey XI, 56) has conjectured on topographical grounds and from a calculation of distances that this might be the Buddhist site mentioned by Huwen Thsang in his Itinerary under the name of Ozuts. The chief object of my visit was to ascertain whether there were any remains on the spot that would help to confirm this theory.

"The present village is a most miserable place, but was evidently of much more importance at some earlier period, since it gives its name to a perganna and, is therefore for the sake of distinction officially styled Kútiya Khás. It lies in a ravine, with a high cliff on either side, one called Koṭ, the other Bará-gānw. The latter was the original site of the

village, and was deserted only about 100 years ago; the other is said to have been a fort. Under a tree on the Bāra-gānw hill have been collected a few fragments of figure sculpture, one of which had been afterwards appropriated for a Muhammadan building, as it shows on the back the endings of four lines of a Persian inscription in bold raised characters.

"The coin was probably found in the Koṭ mound, where bricks of large size are also excavated. Its inscription is in modern Nāgarī characters, and what remains of it is very clear; but so many of the outside letters have disappeared, together with the outer rim of the coin itself, that I am unable to decypher it. I shall be glad if you can enlighten me."

DR. HOERNLE remarked that the coin was a well-known one. It had already been described and figured in Marsden's *Numismata Orientalia* (No. MCCII, p. 789). It was again described and figured in the Appendix to Prinsep's *Indian Antiquities* (Useful Tables, Vol. II, p. 65). In the latter work it is said to be a coin issued by an obscure zemindar of Jayanagar, a village near Bajragarh. The inscriptions are differently read in the two works mentioned, but incorrectly in both. The correct reading appears to be the following. Obverse: *Srī Rāghava Pratāpa Pavana-putra Balavardhaka*. Reverse: *yah sika par chhāp maha Rāja Jaya Singh (Ke date Jayanagar)*. The words enclosed in brackets with the date, are wanting on the present coin. Both inscriptions are in the Hindī language, and in modern Nāgarī characters. The reverse states that "on this coin is inscribed the name of the Rājā Jai Singh, (the date, and the mint Jayanagar)."

The following papers were read :

1. *On Indian Ants of the Indian Museum in Calcutta.*—By PROFESSOR AUG. FOREL.—Communicated by the NATURAL HISTORY SECRETARY.
(Abstract.)

This paper is an account of a collection of Calcutta ants recently forwarded to the author for determination by the Superintendent of the Indian Museum. The collection contains 26 species, of which two are described as new, one from the 'soldier' form under the name of *Pheidole jucunda*, and the other from the soldier and worker forms under that of *Pheidole woodi*, and a third has its female described for the first time.

The paper will be published in the forthcoming number of *Journal*, Part II, for the current year.

2. *Notes on the Chittagong Dialect.*—By MR. F. E. PARGITER.
(Abstract.)

In offering these Notes on the Chittagong dialect, Mr. Pargiter remarked that he was aware how incomplete they were, how many matters

were unnoticed and how much remains to be filled in to render his sketch thoroughly serviceable. These notes were collected some years ago when he was residing in Chittagong. Several of the peculiarities noticed are not confined to Chittagong, but prevail generally throughout Eastern Bengal, though not in so marked a degree. He hoped, however, that these notes, incomplete though they are, might be of use to others, whether as an aid in learning the vernacular, or as an inducement to supply what was wanting.

The language spoken in Chittagong is a dialect of Bengali, but greatly corrupted owing to the remote position of the district, the strong Muhammadan element in the population, and the tendency in East Bengal to speak quickly and clip the words.

These causes have been at work in Bakarganj and the country east of the Meghna, and the language spoken there differs from ordinary good Bengali, the difference increasing with the distance south-eastward. The extreme is reached in Chittagong where the difference is so marked that a native from other parts of Bengal does not readily understand the language.

The paper will be published in full in the Journal, Part I.

DR. HOERNLE remarked that he had listened with very great interest to the paper which had just been read. Any contributions to our knowledge of the dialects of the North Indian languages were specially welcome in the present day when so much attention was beginning to be bestowed on the comparative study of them. There were only two of those languages which had hitherto received any closer examination with respect to their dialects. These were the Hindī and the Bihārī languages. It was well-known that the other Gaudian languages, and especially the Bangālī possessed equally distinct and instructive dialects; but, hitherto, but very little had been made known about them beyond the fact of their existence. It was, therefore, of peculiar interest to receive some information on the Chittagong dialect, one of the most curious, in many ways, of the Bangālī language. Listening to the paper as it was he had marked down a few points which had specially struck him. The process of phonetic detrition in some respects was carried a step beyond the stage in which it was usually found in the Gaudians. The dissimilar Sanskrit conjunct *ks* was assimilated in Prākṛit to *kkh*, and in Gaudian simplified to *kh* or reduced to *h*, but in the Chittagong dialect it was found altogether dropped, as in *deṭte* 'to see' for the ordinary Bangālī *dekhite*. This change was said to be "almost invariable, if the second vowel be *i* or *ī*." But that it occurred also under other conditions was shown by the instance of *hīmnā* (ह्रीना) for *sūkh'nā* (सूचना). The change of an initial sibilant or of a *chh* to *h* was almost invariable in the Chittagong dialect,

but this phenomenon might be observed also in other dialects, and curiously enough it was found of the greatest frequency in the extreme west, in the Sindhí and Panjábí; so that here the dialects of the furthest east and the furthest west most nearly approximated.

NAWAB ABDUL LATIF KHÁN BAHADUR said :—Mr. Pargiter is deserving of the best thanks of this meeting for the very interesting paper which he has read this evening. He has taken great pains in enquiring into, and collecting information regarding, the shape which the Bengali language has assumed in the district of Chittagong. If similar enquiries were made by gentlemen residing in the other districts of Bengal, the various forms which the vernacular has taken in those districts, would show a most interesting and instructive state of affairs. What has struck me much is the way in which the Bengali language has become gradually more and more corrupted, the further you go in all directions from the district of Nuddea, the seat of pure Bengali.

While on this subject, it would not perhaps be uninteresting, if I mention my own experience of the various forms which the Urdu language has assumed in various parts of India. It seems to me that the principle is exactly the same as in the case of the Bengali already noticed by me. The chief seat of Urdu is Delhi and the further the distance from Delhi, the more and more corrupted does the Urdu language become. As it travels northwards, it gets mixed up with the Gurmukhi and Pushto in the Panjáb and the Frontier districts, and loses its purity. Towards the south-west it passes through Rajpútáná, and becoming mixed up with the Marwari Nágari gets more and more corrupted until it reaches the Province of Sindh, and there getting mixed up with Sindhí, assumes the worst form. Travelling towards the south, it passes through Gwalior and Indore in Central India, and reaches Bombay viâ Baroda, and thus becomes mixed up with Nágri, Gujrati, and Marhatti, thereby entirely losing its integrity. It then travels further south towards Hyderabad and Madras, and assumes the worst form by getting mixed up with Canarese, Telugu and Tamil. In some of the districts around Delhi, the Urdu preserves its integrity to a certain extent, with some slight but quite perceptible corruptions. In travelling south-east, towards Bengal, it becomes mixed up with the Braj Bhasha of Muttra, the Nágri of various forms all along the south-eastern confines of Behar, and finally with the Bengali language, becoming more and more corrupted the further it moves from Delhi. Of all the cities at a distance from Delhi, Lakhnau, Murshidábád and Dacca have kept up the Urdu in a much purer condition than other places. The Urdu of Bombay is very bad, and that of Hyderabad and Madras even worse. In my

travels through all these places I have been much struck with the different ways in which the Urdu language has been corrupted; but what seems to me to be most curious is, that in such a large Muhamadan city as Hyderabad, the Urdu has not been preserved in such a decent condition, as at Lakhnau, Murshidábád and Dacca. And it is also remarkable, that whilst the idiomatic expressions of Delhi have been carefully preserved in Murshidábád and Dacca, they have been quite corrupted in the chief towns of the Province of Behar, through which the Urdu language has travelled to Bengal. It seems to me, that it would be a gain to our Society if gentlemen who take an interest in this subject, and who have the time and the inclination, would direct their attention to enquire and collect information as to the various forms which the Urdu has assumed in different parts of Hindustán.

DR. HOERNLE suggested that the Nawab himself would be the best qualified person to supply that information about Urdu. All information of that kind was certainly very desirable.

LIBRARY.

The following additions have been made to the Library since the meeting held in November last.

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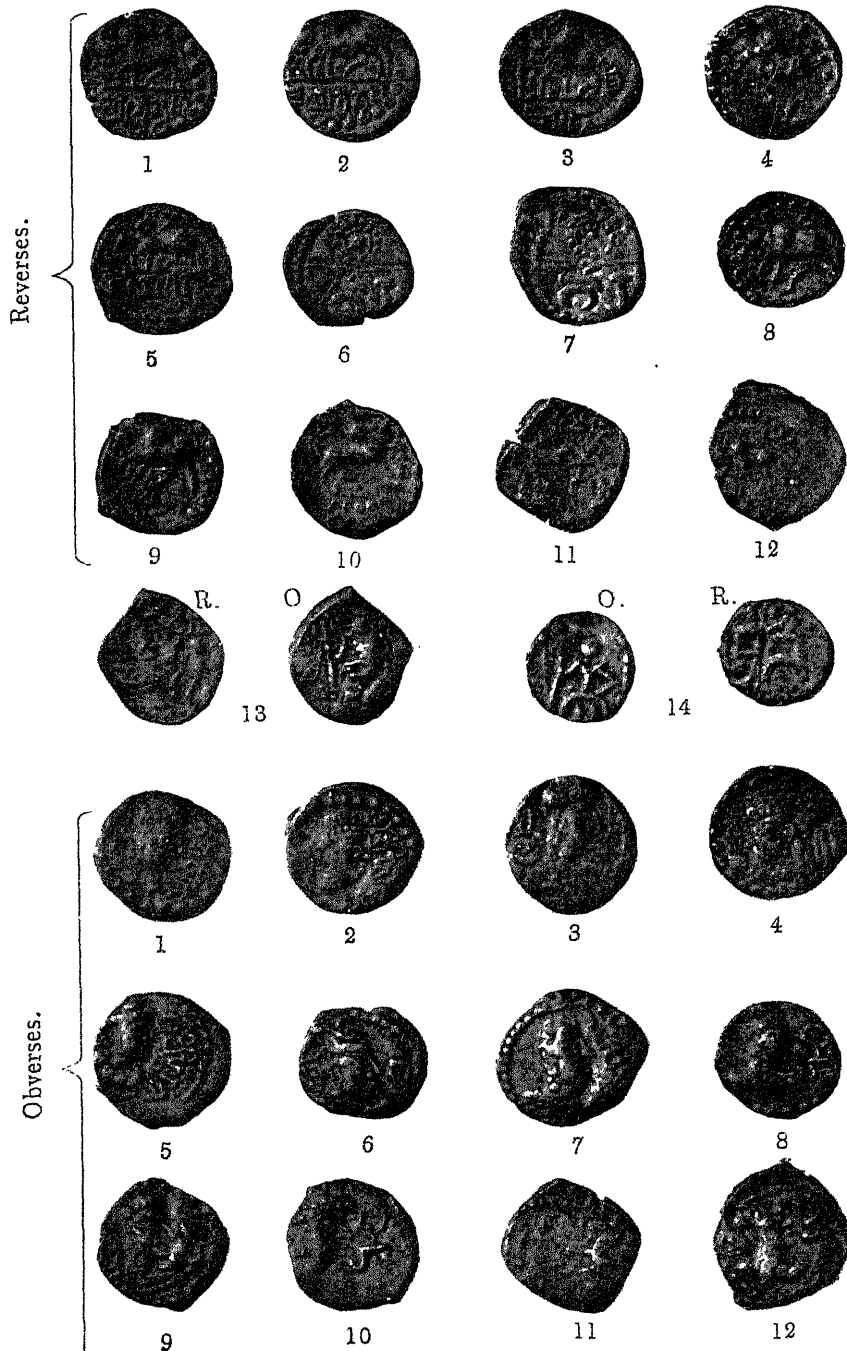
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OBVERSE.

REVERSE.



Photo-Gallery.

100 GOLD-MOHUR PIECE,

Struck by the Emperor Aurangzeb, A.D. 1673 (1083 A.H.)

Full size.

Survey of India Office, Calcutta, June 1935.

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